DESIGN MANAGEMENT IN A STARTUP

A MULTIPLE CASE STUDY ON MANAGING THE VISUAL PRODUCT IDENTITY
IN 13 STARTUP COMPANIES

MASTER'S THESIS
JUKKA KORTESOJA
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A MULTIPLE CASE STUDY ON MANAGING THE VISUAL PRODUCT IDENTITY IN 13 STARTUP COMPANIES

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ABSTRACT

How do you manage the visual identity of a product in a startup company with no product history? Determining how a product should look like is an important and challenging task for a product based company. Product's appearance and connection to a recognized brand influences the customer's buying decisions and enables the product to get noticed on the market. In order to build a strong brand identity, a company has to manage the visual identity of their products and how the identity develops over product generations. A startup company developing its first product often has to create the visual product identity from scratch, with no product history or brand heritage to utilize and built on. At the same time, a startup may be facing significant challenges and uncertainties in building up its business, and strategic intentions in visual identity of a product may be only a secondary priority for the company.

This master's thesis was carried out to find out how a startup company can manage the visual identity of a product for commercial benefits. First, a literature review was carried out to find out what suggestions from the past studies in design management could be relevant and adaptable for a startup company. The empirical part of the research was a multiple case study on thirteen startup companies developing physical products. The study revealed strategic intentions the companies had in developing the visual product identity. A further focus was in finding out how the intentional and unintentional choices in the practices of product development process influence the formation of visual product identity.

The past literature on design management was found to emphasize a strategic approach in managing visual identity of the product, and less guiding was found for implementing the strategic intentions in a practical level. In contrast to the literature, this study indicates the practices of product development process playing a key role in defining the visual identity of a product in a startup. Structure of product development process, how professional designers were used, and how the company made design decisions, were found to be the most influential in forming the visual product identity. Three product development models were defined from the findings of the case studies. These models point out how the agile nature of a startup can enable a synergy between the development of a visual product identity and a solid brand strategy. These findings were derived into recommendations for a startup founder on how to utilize the strategic potential of product's visual identity in a practical level for commercial benefits.

Keywords: design management, startup, visual product identity, product styling, brand identity, strategic design

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1 INTRODUCTION

How do you manage the visual identity of a product in a startup company with no product history? Determining how a product should look like is an important task, and the appearance of a product seems to play a major role in the identity of a product based company (Olins, 1990). In order to build a strong brand, a company has to manage the visual identity of their products and how this identity develops over time. However, when designing the appearance of the very first product, there is no product history or brand heritage to draw from, and the visual product identity often has to be build from scratch. At the same time, establishing a suitable identity is a challenging task, with few guidelines for managing the strategy in the practices of product development process. This is even more so for a startup company struggling to build a business and get recognized on the market.

Strategic use of visual product identity has been shown to be important in design management literature, and to hold several commercial benefits for companies (see for example Karjalainen 2004; McCormack, Cagan & Vogel, 2003). For example, visual product identity can be managed strategically to implement strong consistency across product portfolio, which is shown to build recognition for the brand and its new products (Karjalainen 2004; Warell 2001). Still many companies have problems in managing visual product identity and thus creating and maintaining a successful product brand. (Person et al., 2007)

The visual identity of a product is based on the strategic intentions behind the design, or how the company thinks their product should to look like. These intentions are expressed in the product design with a use of design features, like shapes, forms, colors, materials and surfaces that define the characteristics of the visual identity of a product. By intentional design, symbolic meanings and brand values can be communicated with the design features. The use of these features can be managed strategically to foster product differentiation, make the product and brand recognizable, and foster a desired brand image. (Person et al., 2007). In the practical level of product development, the professional designers are in a key role when implementing the strategic intentions into visual product identity. The managers making decisions of the design options proposed by designers can also have a major role in realizing the strategy of how the products should look like. (Ravasi & Lojacono, 2004)

In a growing startup organization there may be considerable uncertainty in both the internal and external environments. In this situation how the product looks like and especially why, may be only secondary concerns for managers and designers. However, when introducing a new product on the market the appearance of it may be what makes or breaks the success, and the first product also builds the basis for brand recognition in the future (Person & Snelders, 2009).

1.1 RESEARCH OBJECTIVES AND QUESTIONS

This MA thesis was carried out to find out how to manage the visual product design for commercial benefits in a startup company. As a general mindset for this study one should consider: *It is not that relevant how a product looks like, but why it looks like it does, that is the question.*This study started with a literature review with an aim to seek answers to the following questions:

What aspects of a startup company could affect the formation of visual identity of a product?

How the past studies suggest a company can manage the use of visual product design for commercial benefits?

The empirical part of this thesis is a multiple case study conducted in thirteen startup companies to find out how the companies manage their visual product design is real life. The case study aimed to find answers to the following questions:

How the startup companies manage the strategic intentions in visual product design?

How the practices and organization of the product development process influence visual product design in startup companies?

The scope of the research focuses on startup companies in their early stage when they have their first product on the market, or still waiting for the market launch. The scope is further focused on startup companies with a physical product as a main offering. The theoretical background for the study is based on the most referenced studies in design management field. Further focus is in the studies that were found relevant or adaptable for startup companies. It was important to look at the companies developing their first product, and further with no parallel products in the portfolio. These companies seem to be the least explored area in the strategic design management literature. They also cannot utilize design consistency over product portfolio or over product generations which are often mentioned playing a major role in development of brand recognition.

1.2 RESEARCH METHODOLOGY

The study is an exploratory qualitative research targeting to find out practices and methods for managing the visual identity of products in startup companies. First a literature review was carried out to build a theoretical background and to focus and structure the further research. During the literature review, the findings on past studies were reflected to the characteristics of startup companies, to indicate the adaptable theories as well as conflicts and shortcomings for using the theories in guiding design management in startup companies.

A case study approach was selected for the empirical part of the study involving 13 Finnish startup companies that were developing physical products. The case selection was made with theoretical sampling in order to extend the emerging theory with variation and extreme cases in the selection. The data gathering was done by interview research carried out using a semi-structured interview method. Data was analyzed with an inductive theory building approach and a grounded theory method.

1.3 STRUCTURE OF THE THESIS

Thesis starts with the literature review in the chapter 2. In the beginning of the literature review the characteristics of startup companies that were found relevant for the study are presented. The goal of the rest of chapter 2 is to give an understanding on how visual identity of a product can be managed strategically, and also how to manage the practices in product development developing the visual identity. The aim of the last section in chapter 2 is to explain the conflicting and adaptable parts of the theory for guiding the product design management in a startup company. The goal of chapter 3 is to clarify the methods used to conduct the empirical part of this thesis. In chapter 4 introduces the case companies that were selected for the study. The purpose of chapter 5 is to present the findings of the case study research. The goal of the chapter 6 is to give a conclusion for the findings of this thesis, combining the findings of literature review and the case studies. The aim of the last section in chapter 6 is to present the author's recommendations for startup founders.

2 LITERATURE REVIEW

Startups may face considerable uncertainty in both the internal and external environments. In this situation the visual identity of a product, and how to develop it over time, may be only a secondary concern for managers and designers. However, the choices made in visual product design can ultimately make or break the commercial success of a product. How a product looks like is critical for the initial impression and evaluation of product properties, as well as for consumer's buying decisions (Veryzer, 1998). This literature review is carried out to find out how the past studies suggest a company can manage the use of visual product design strategically for commercial benefits. Further focus is in the design management studies that were found relevant or adaptable for a startup company. Although there were no studies found specifically considering the challenges and characteristics of product development in a startup company setting, there are theories that can be adapted to guide visual design management also in a startup.

Many of the potential problems and challenges of startups, that may also influence their ability to use visual product design strategically, seem to be internal. They are mostly challenges in decision making and founders' personal characteristics. Ulrich and Eppinger (2012) state that, compared to larger and older organizations, startups are typically extreme examples of project organizations with the CEO as a project manager. A startup company has one cross-functional team working on one project towards a common goal. Startups are agile and flexible in decision making. Also their resources can be optimally allocated within the project development team. In startups, technical and marked trade-offs can be evaluated quickly, to guide the direction of product development. Although having their favorable characteristics, startup companies share many of the challenges bigger companies have in their product development. The major issues of project organizations in general are maintaining functional expertise over time, and how to share learning from one project to another. (Ulrich & Eppinger 2012)

Wasserman (2012) points out several typical pitfalls of startups. When making decisions, startup founders may not realize the long-term consequences of their short-term decisions. The easy short-term decisions may bring problems in the long run, and on the contrary, often the hard short-term decisions may be the best in the long run. A good example of such decision is hiring or firing a family member. Founder's passion is essential in building the startup, when the founders have to stay motivated through the uncertain times while creating a business. However, this passion may turn on them. Founders tend to prefer optimism over realism and instinct over systematic planning. They have a strong attachment to their ideas, startups and employees, which blinds them from making the reasonable decisions. Following their instinct and optimism may prevent the founders from thinking hard enough their decision and from seeing all the possibilities and consequences. (Wasserman, 2012)

Two of the most common motivators founders have in building up a business are building wealth and maintaining control over the company. Few founders are able to achieve both, and when this is the aim the two motivators are almost always conflicting, which disrupts the company. Making consistent decisions driven by either of the two motivators is more likely to create the

desired outcome of either greater financial gains or control over the business. Other major issues regarding startups are the founder's background and how the decisions are made when there are multiple founders. Background and knowledge affect the ability to build and run a company effectively. Founders may not notice the gaps in their skills and knowledge through the excessive optimism. (Wasserman, 2012)

The founders' past relationships between each other often has an influence in the company's internal efficiency: Startups founded by friends or family members tends to be the least stable compared to founding a company with an ex co-workers or fellow students, or even startups founded by a group of strangers. Also having multiple passionate founders may lead to shared decision making to avoid conflicts. However, this creates delay and inefficiency in decision making, as well as lack of accountability. (Wasserman, 2012)

The next chapter aims to clarify the concepts of visual product identity and managing visual design, and illustrate why they are important for a product based company (section 2.1). How the visual product design can be managed strategically and what are the common goals in doing so, is presented in section 2.2. The purpose of section 2.3 is to show how the development of visual product identity can be managed with product development practices. Finally, section 2.4 aims to shows adaptable and conflicting theories for managing visual product design in a startup company.

2.1 VISUAL IDENTITY OF A PRODUCT

For conceptual clarity, the difference between concepts *identity* and *image* has to be made clear. For example for a human being, identity consists of the personal characteristics: appearance, knowledge, experience, personality, preferences and so on. The image of that person is the interpretation another person – as a viewer – composes. In an ideal situation the person composing the image knows well the person who is the object of an interpretation, and the image is close to the identity. Otherwise the image is prone to be distorted, for example by assumptions, biases and lack of knowledge. In communication terms, identity is related to the sending side, as image is the interpretation of a certain message from a receiver's perspective (Karjalainen, 2001).This is illustrated in figure 1.

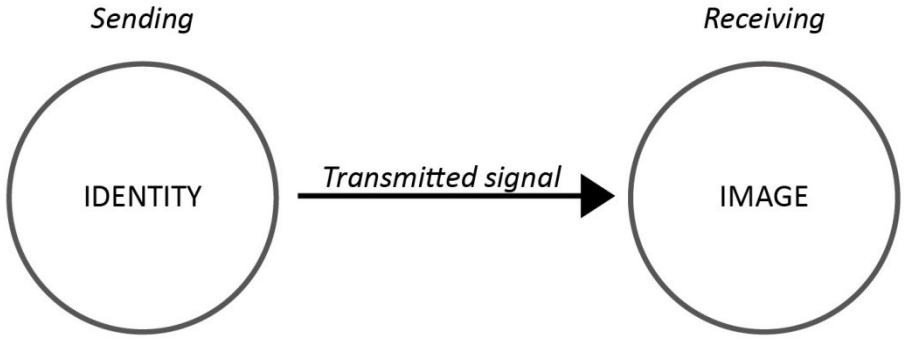

Figure 1. Identity and image in communication terms. (Adapted from Karjalainen, 2001)

In a corporate context, use of the term identity suggests that companies or products can be described through specific characteristics, similarly to human beings. These characteristics give meaning for the company and its products by raising specific associations that are attached to the brand name of the company. (Karjalainen, 2003). How these associations are interpreted and acknowledged by the consumer and other viewers is what makes the brand image.

In this thesis, *visual identity of a product* refers to the visual attributes of the product. The same phenomenon is also described as *the look and feel of a product.* Another concept used in design literature for the visual dimensions of products is *style*, and *styling* describes the act of creating a certain style. Style is used similarly in the literature of art. In order to produce consistent and recognizable effect in their work, artists as well as designers, operate in an existing style. The known solutions and accepted techniques from the visual style can be used to avoid unnecessary risks with the acceptance of new solutions. When new solutions are explored, the artists and designers are establishing a new style (Person et al., 2012). From the perspective of this thesis, terms style and visual identity can be used as synonyms to describe the visual attributes of a product. Similarly when referring to the act of creating visual identity of a product, *styling* and *visual product design* have been used.

In the next sections we see how the visual identity of a product is linked to company's brand identity and what the strategic management of visual product design means for brand recognition.

2.1.1 VISUAL DESIGN FOR BRAND RECOGNITION

In the literature of design management, visual identity of a product is often connected to brand identity. (For example see Karjalainen, 2004) Also visual product design is seen as a tool for creating brand recognition. Recognition is an essential concept in brand creation, and product design is in a key role in the visual recognition of many successful brands. In visual product design, various *design features* can be used to achieve visual recognition. Companies may select certain design features, like shapes, forms, colors, materials, surfaces, textures, graphical elements and logos simply based on their attractiveness, and use the selected features repeatedly in their products to create recognition. By managing the selected features strategically and consistently, companies can significantly affect on the visual recognition of their brands (Karjalainen, 2007). As Creusen and Schoormans (2005) point out, "The unity of intent and consistency of action are starting points for successful design".

However, in order to create solid and consistent brand recognition, Karjalainen (2007) suggests that the design features should be value-based. Value-based design features become *brand design cues*, a term used to describe the relation between the brand values and design features in visual identity of a product. Visual design has a strong potential in generating symbolic associations to communicate the brand values. When used without any reference to the brand values, design cues may be perceived as artificial. Still, when used repeatedly and consistently, artificial design cues can also become powerful in creating brand recognition. A common

Figure 2. Dewalt D25762K (www.dewalt.fi, retrieved 23.10.2013)

example is choosing one color to be used noticeably throughout the product portfolio and product generations. For example Dewalt power tools can be easily recognized due to their yellow color. (figure 2).

2.1.2 MANAGING VISUAL DESIGN

Visual identity of a product is something that comes together in many different ways. How it has been managed varies between industries, companies and market segments. In the other extreme, it is an outcome of a carefully thought out design process for a strategically managed product identity. Common examples in the design management literature for this formation of product appearance are the products of Apple. In the other end, the appearance of the product may be a minor priority in the product development process. The visual identity may be the result of developing the other aspects of the product, like the mechanics or other technology, and the visual identity as such is not important. This kind of formation of the visual product identity is often found in the machinery industry, or for example in companies developing computer components. However the visual identity is rarely irrelevant with products that are used by and looked at by people. For a product-based company, the appearance, or the visual dimensions of the product are often an important tool for differentiation (Karjalainen, 2001). According to Olins (1990) a designed product seems to be the most prominent way of how the company's identity emerges for a product based company, for example on the car industry.

Regardless of the way the product is developed or how much effort and appreciation the appearance of it gets in the process, it always has a visual identity. Further, how a product looks and feels like can always be associated with certain values or other intangible attributes. In other words it always sends a message that the viewer is interpreting to form a certain image of it. The companies can intentionally design the visual identity and the message it sends (Karjalainen, 2007). By simply designing the product to be more attractive, companies can strengthen their brand image (Page & Herr, 2002). When considered as a strategic tool, visual product design can be used to foster desired brand image and to create brand value (Schmitt & Simonson, 1997; Stompff, 2003; Borja de Mozota, 2004).

The relevance of strategic use of visual design is not limited to consumer markets, which is shown for example in the success of Ponsse (Figure 3), gained through a distinct and coherent style throughout product portfolio. Also the commercial value of visual design becomes evident in the amount of design patents and copyright infringements lawsuits. (Person et al. 2007) Apparently the numerous companies copying the styles of competitors are highly valuing the visual design because they are willing to even intentionally break the law in doing so. In the other hand the companies protecting their styling and visual identity, are valuing it so high, that they are willing to put time, effort on the expensive lawsuits with the risk of losing the case.

Figure 3. Ponsse Bear 8W (www.ponsse.com, retrieved 23.10.2013)

Two viewpoints for strategic use of visual design are found in the literature of design management: 1) Management of the strategy in visual product design and 2) Management of visual product design in practice. By *management of strategy in visual product design* I refer to the management of theoretical strategy of how the thing should look like. This strategy by itself does not create anything concrete and visible in the products without the act of visual design in practice. By *management of visual product design in practice* I refer to the managerial practices to implement the visual product design strategy in product development process for creating the visual identity of a product. In this thesis, I aim to make a separation between the theoretical strategy and the practices, when I describe the concept of visual design management. This is illustrated in figure 4.

Figure 4. Visual product design management

2.1.3 VALUE OF VISUAL PRODUCT DESIGN

Measuring the value of the efforts and resources put on visual design can be problematic for companies. The economic view would be questioning: *How am I going to get back the investment put on visual design?* The company's own interpretation of the designed product as

more attractive or *good looking* is a highly subjective view and could not describe the ability of visual design to sell the product more, or endorse the consumer to pay more for the same product. People's reactions on visual identity of a product can differ widely, and depend on their personal experience and the overall market environment (Person & Snelders, 2009).

The basis for evaluating visual identity of a product is *recognition*. The audience: art historians, consumers, designers and the companies may focus on the style of products and the brands they belong to, based on what is similar and what dissimilar (Schoolmans & Robben, 1997). In the context of this thesis, *brand style* refers to the combinations of visual design characteristics, or design features that belong to a certain brand. Recognition of a certain product belonging to a brand style is based on the perceived similarities and differences between products within the brand and between different brands. Similarities lead to recognizable effects, and the difference to other brands strengthens recognition. Evaluation of the recognition of visual product identity is dependent of the period of time of the evaluation, and the market it is compared to. (Person & Snelders, 2009)

The *market dependence* is related to the consumers' awareness of the brand in question, the brands it differs from and the market-specific view the consumers have in interpreting the brand attributes. Viewers in the market may not be aware of the company's practices and intentions, and they may have other interests when connecting products to a brand style. As Person and Snelders state (2009, p91-92)"the grounds on which a receptive audience identifies a brand style are only loosely connected to the practices and intentions of its producers." What we see in certain styles is based on what we seek in them. Even if being fully aware of designer's and company's intentions, the interpretation of the style is always a personal view. (Person & Snelders, 2009). Deviation from others is what grabs attention in style. But when deviation turns into convention of its own, the attention is lost. (Gombrich, 1999)

Figure 5. Canon EOS-1D X(top) and EOS-1Ds (www.dpreview.com, retrieved 23.10.2013)

The *dependence in a certain time period* is evident with styling of the more trend and fashion oriented products, like clothing. The design features or cues that are perceived as attractive and stylish at one time may seem outdated on the next year. The same can be said about the more technology oriented fields, like consumer electronics, where in one hand the technological development is exposed directly in the visual design features, like the size of the screen on digital cameras. Canons professional model EOS-1Ds from the year 2002 looks otherwise quite similar

to the 2012 model EOS-1D X (figure 5), but the small screen in the back of the camera gives away the age of the model. Also the style of products on a certain time period has its characteristic features. These can be used as styling tool when seeking for recognition with certain "retro" products, having a strong resemblance to the products of the past time period. An example from the car industry is the Chrysler PT Cruiser. The model was launched for the year 2001, and had strong resemblance to the cars from the early decades of 20th century. If the styling resemblances to a past time are not used strategically, they may also have negative effects on the customer acceptance. The design may also have unintentional references to the past time periods, which makes the product look outdated (Person & Snelders, 2009).

2.2 STRATEGIC USE OF VISUAL PRODUCT DESIGN

There are several aspects in strategic use of visual product design. In this section we see that consistency, as well as change and differentiation are key concepts driving visual product design for brand recognition. Company's strategic intentions can be clarified for designers through design philosophy, and formalized in products with the use of implicit or explicit design features.

Creation of a distinct brand style has been discussed in the literature with the idea of creating brand recognition through repetition. According to this idea, designers replicate certain tangible, explicit design features (shapes, colors, materials etc.) in the new product (Kotler, 2000; Baxter, 1995). However, defining brand style this way may overlook some important characteristics of brand styles and their meanings assuming brand style in product design only refers to the past. Some companies have established a style without replicating the attributes in their previous products, and also the perception of brand style is always heavily influenced by what the consumer already knows about the brand. Also there are products on the market that share the same attributes but are not perceived as products of the same brand. Also the concrete attributes repeated over the portfolio, needed to create brand recognition, may be created with similarities on a more abstract level. These attributes are symbolic expressions of the brand values and thus there does not need to be specific design elements incorporated in all the products to have a coherent brand style throughout the portfolio. These similarities on abstract level are used as implicit design features. (Person & Snelders, 2009) For example many products from Alessi use references to childhood to express a similar type of playfulness in their products, without a repetition of concrete, explicit design features, such as shapes or forms. (Alessi, 1994)

2.2.1 DESIGN PHILOSOPHY

Design philosophy can be considered as a generic blueprint for product development, containing design principles and stylistic identity of a brand's product design. It provides the strategic basis for creating brand recognition through coherent visual identity for the products. It establishes a connection between the company's core capabilities, its overall strategic intent, and core brand image associated to its competitive scope. It is essential, that the company's design philosophy co-evolves with these forces. Design philosophy helps designers to relate their work to broader

issues of the brand, competition and market positioning. (Ravasi & Lojacono, 2004) This formation of design philosophy is illustrated in figure 6.

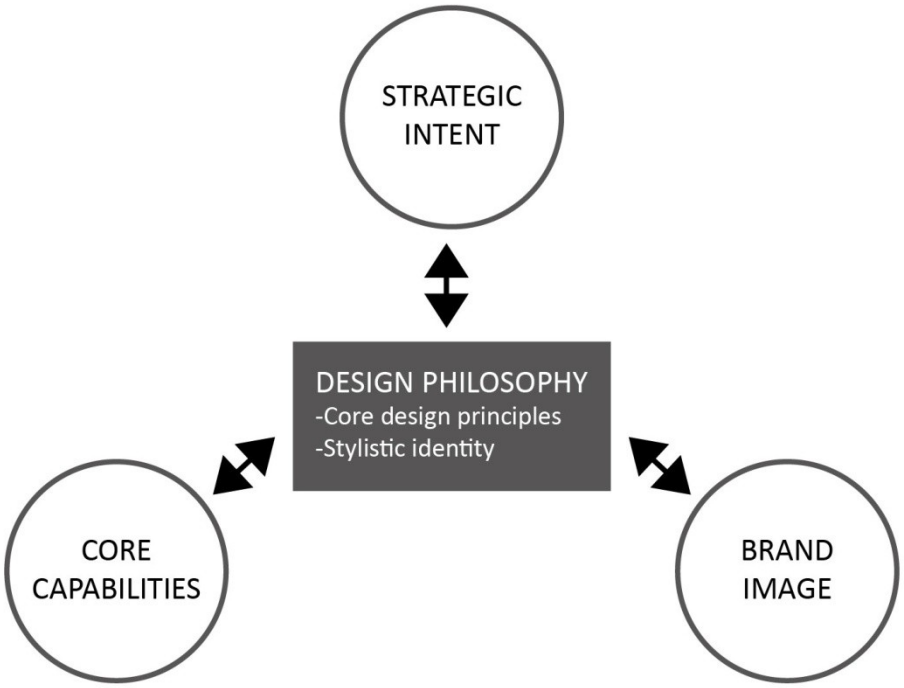

Figure 6 Design philosophy (Adopted from Ravasi and Lojacono, 2004, p 70)

Some companies are also stating their design philosophies and using them in marketing communication to enhance the intended brand image. For example, Bang & Olufsen opens up, along the other story behind their design, the philosophy in short as "creating audio concepts that combine brilliantly authentic sound quality, simple yet surprising design and a touch of magic. So that living with it becomes a special pleasure." (Beoworld, 2006) With its unique design philosophy Bang & Olufsen has gained brand recognition through decades.

Apple uses a short video to explain the company's design philosophy, captioned "Here, simple phrases paired with elegant visuals describe the thoughts and emotions that go into creating each Apple product." The phrases go as following:

IF EVERYONE
IS BUSY MAKING
EVERYTHING
HOW CAN ANYONE PERFECT
ANYTHING?
WE START TO CONFUSE
CONVENIENCE
WITH JOY
ABUNDANCE WITH CHOISE.
DESIGNING SOMETHING
REQUIRES
THEN DO WE SIGN OUR WORK.

FOCUS
THE FIRST THING WE ASK IS
WHAT DO WE WANT PEOPLE
TO FEEL?
DELIGHT
SURPRISE
LOVE
CONNECTION
THEN WE BEGIN TO CRAFT
AROUND OUR INTENTION
IT TAKES TIME…

THERE ARE A THOUSAND
NO'S
FOR EVERY YES.
WE SIMPLIFY
WE PERFECT
WE START OVER
UNTIL EVERY THING WE
TOUCH
ENHANCES EACH LIFE
IT TOUCHES.
ONLY

(Apple, 2013)

2.2.2 DESIGN FEATURES

As cited by Karjalainen and Snelders (2009) from the work of Giard (1990), “all manufactured products can be seen as stating something through their design, intentionally or unintentionally, passively or actively“. When used intentionally, visual design and design features can be used to obtain certain goals in brand value creation. Driven by design philosophy, the brand’s core values and message can be strategically communicated through the design features. As stated by Karjalainen and Snelders, this strategic and goal-oriented character means visual design “should function in coordination with other strategic intentions of the company”. The design features as part of the brand communication, represent a part of the brand identity. Design features can also be used to support the other communication media, like advertisement, and this way the whole brand communication functions more effectively and efficiently (Mooy & Robben, 2002).

Karjalainen and Snelders (2009) notice that the importance of embodying the brand values in the product design features, instead of just using only artificial design cues repeatedly, is stressed out in the literature by Kreuzbauer and Malter (2005), Barsalou (1999), Biederman(1987), and Zaltman (1997). These authors also point out the relevance of design features in codetermining the meaning of the brand. Kreuzbauer and Malter suggest that identification of a product as member of a certain brand is dependent on visual appearance that can carry a set of associations of its own. Karjalainen and Snelders also point out that it is important to notice the capability of design features in communicating the brand values in their own, and being the “direct embodiment of (interlinked) product and brand associations” (Karjalainen & Snelders, 2009, p 8).

In their study of goals of styling, Person et al. (2007) found out that creation of symbolic meaning was considered as one main goal of product styling by all of the participating design experts. Creation of symbolic meaning refers to the capability of visual design to provide the product a luxury status, connection to fashion trends and other values that are held by the target consumer. For example visual product design can be used to support dynamic nature of sports equipment in the eyes of a consumer. The symbolic meanings are created through the associations the design features generate. Associations can also refer for example to locality or certain designers, or a certain period of time, via using similar design features to the ones used in that time period.

Product symbolism should be carefully thought out keeping in mind the qualities and preferences of the target audience making the interpretation of the associations. The product symbolism can also have negative influence on consumer behavior (Person et al, 2007). Product could for example be considered too feminine or masculine by some consumers, just based on the looks of it. Also the image and reputation a brand has gained on the market affects the formation of recognition, and sets certain requirements for design consistency from the market point of view. For example when comparing design strategies of Nokia and Volvo, Karjalainen and Snelders (2009) found out that because Nokia had a short history, the brand or name being unknown outside Finland before the 1990’s, the company was expressing the creation of its own

history with experimental designs. Volvo on the other hand had a great heritage and used the safety reputation and Scandinavian origins intensively in its marketing communications, and design features. (Karjalainen & Snelders, 2009)

As mentioned earlier, visual identity of a product can contain explicit and implicit design features. There features give explicit or implicit design cues to the meanings in design philosophy, and brand. Karjalainen (2007) explained the difference of these cues and the design features linked to them through the design approach used by Volvo. In the explicit cues, the intention is the use of features that are immediately perceived and recognized. In the design of its cars, Volvo uses for example a strong shoulder line, the V-shaped bonnet, characteristic front with the soft nose and diagonal Volvo logo. Also the distinctively carved backlights, flowing line from the roof to boot-lid, and the third side window. These design features are the ones that make Volvo cars immediately recognizable. By using explicit features, companies can simply repeat the same features over the product portfolio and product generations to create recognition. This strategy can however result in undesirable results if for example the consumers get bored to the features, the market changes so that there are preferable solutions, or the features start to look out dated. Also new products have to continuously grab the consumers' attention. Therefore the main concern for companies often is balancing between change and continuity, familiarity and novelty. (Karjalainen, 2007)

Implicit design cues use qualitative references, or combinations of references. They are not directly distinguished but involve associations to a generic design philosophy or the brand and are used with the intention to be recognized through the associations. As Karjalainen (2007) phrased, "Implicit cues comprise references that cannot be distinguished but, when used, 'make sense'". They are always value based. The recognition through implicit features is dependent on the receiver's background and biases, and the cues may also fail to communicate the brand values, thus not supporting the recognition of the product. In the design of Volvo cars specific shapes are used to refer to the values such as safety, dynamics and Scandinavian design heritage. The material shapes can change from product to another, still carrying the implicit reference to the same values, being the implicit design cues characteristic for recognizing a Volvo product. When the same shape that is used implicitly to refer to brand values, is used repeatedly in different products, it becomes an explicit design feature. (Karjalainen, 2007)

In order to understand how companies use explicit and implicit design cues in their visual product design, there are some analysis methods that can be used. For example Warell's (2001) Design Format Analysis (DFA) method can be used for analyzing explicit cues. In this method a number of distinct design features are selected, based on various criteria, and the ones that seem most important are selected for analysis. The appearance of these features is examined through different products (Karjalainen, 2007). Analysis of implicit design cues has a lot to do with subjective view of the person making the interpretation. However there are more objective tools for the analysis. The "first and well known method to conceptualize characters" (Krippendorff, 2005, p.159) is the method of semantic differentiation by Osgood, Suci and Tannenbaum (1957). If tools like the semantic differentiation method are used to gather

interpretations of the visual design from a large number of people, the results can be quite reliable (Karjalainen, 2007).

Design cues in visual product design can also be used as stringed or genuine brand references. Stringed brand references are the design cues, which meanings are always affected by expectations set by the brand; the associations that the design features evoke are themselves entangled with additional associations evoked by the brand (Karjalainen & Snelders, 2009). The genuine design cues communicate the values as their own, and do not need previous knowledge about the brand values. They would be the "the first (unbiased) association that a design feature brings to mind" (Karjalainen & Snelders, 2009).

2.2.3 STRATEGIC USE OF DESIGN FEATURES

The company's strategic intentions are a starting point for the use of design features for brand recognition. According to Karjalainen (2007), explicit design cues, whether they are value based or artificial, are used to build a visually consistent portfolio. When a company uses a more flexible design strategy with varying use of design features in different products, brand recognition can be created with implicit design cues (Karjalainen, 2007).

In their research, Karjalainen and Snelders (2009) looked into design strategies of two large companies, Volvo and Nokia, and their use of design features for brand recognition. Volvo had a smaller product portfolio where the company used consistently explicit design features across the portfolio. In the other hand Nokia, with a larger overall product portfolio, has a more flexible strategy where implicit design cues bring the brand recognition. There is no simple recipe for creating visual recognition for a brand through product design features. Instead, in the case of these two companies the creation of visual recognition was based on a continuous renewal of the connections between brand values and design features. Karjalainen and Snelders list the following attributes affecting the use of design references for brand recognition:

- Life-cycle stage of product category
- Renewal cycle of product models
- Brand positioning
- Width and structure of the product portfolio
- Brand heritage
- Product history

The *product category* where the company positions its products and operates creates requirements for selecting a styling strategy. The industry's life cycle was especially found to have an effect. In the fast growing mobile phone market, with high differentiation between existing models on the visual design, Nokia chose a flexible strategy to answer the individual needs of different target groups. On the other hand, Volvo with its consistent strategy across portfolio operates on a mature car market. There the product lines face direct competition of

corresponding models from competitors and the competition is based on differentiation between brands. (Karjalainen & Snelders, 2009)

The *life-cycle of products* was another differing factor between the products of Volvo and Nokia. Volvo models were designed to last for 5-10 years on the market, so the same design features also had a long lifespan. Nokia phones were typically 1-2 years on the market and followed short term market trends. Also Nokia regarded design innovation as their core competence, thus it had a need for a flexible design philosophy. (Karjalainen & Snelders, 2009)

Nokia was *positioned* as a large player on mobile phone market and covered a large number of market segments. Nokia used a strategy of bringing out segment specific models. Volvo on the other hand was a smaller company among the car manufacturers, and had a need to find its niche segment for effective differentiation. (Karjalainen & Snelders, 2009)

Volvo had a long *product history* compared to Nokia. Volvo made a strategic renewal of the company, changing the design significantly compared to the previous product generations. In the renewal, it was important to continue the *brand heritage* and communicate the connection to the past. Although the design of Volvo car's changed significantly from the previous models, it used design references to the past Volvo models. Therefore the consistent development of brands design philosophy does not necessarily mean an evolutionary and linear development, but can have leaps over some product generations where the same features do not continue constantly. (Karjalainen & Snelders, 2009)

2.2.4 CREATING RECOGNITION

Establishing recognition through product styling refers to the product being recognized – by the visual dimensions of it – as belonging to for example a certain brand, as being made for a certain target group, or as being made by a specific designer (Person et al., 2007). It could also identify the product as belonging to a certain product category. It is evident that continuum in product styling over the portfolio, and in brand styling over time, brings recognition for the brand (Karjalainen, 2003) Companies are often identifying the specific design features that define their brand to the consumers, in order to understand how the consumers relate their products to their brand. By using these features the companies can make the new products recognizable (Person et al., 2007). However, in order to create attention for the new products, the companies have to balance between using the defining design features that create recognition for the brand, and drawing attention by using products or design features that deviate in their styling (Khermaouch, Thompson & Benezra, 1997; Schoormans & Robben, 1997; Person et al., 2007).

The importance of recognition was also illustrated in the study comparing effects of brand recognition and product ratings on consumer choices, made by Thomas and Williams(2013). They found out that familiarity and recognition of the products had a greater positive effect on consumer's buying decisions than product ratings. A famous product was chosen by the test

consumers even when the additional star ratings rendered it as less attractive than the alternative product. (Thoma & Williams, 2013)

Gaining recognition is a fundamental aim in visual design of brand references. The basic idea is that developing recognition requires more than one product. Having several products as such is not enough, but using design features consistently within the products is the key to recognition. Consistency is already embedded in the definition of recognition: "re-cognition, cognitizing again, identifying something by its kind" (Krippendorff, 2005).

As discussed earlier, how companies strategically use consistency varies considerably, and the best practices seem to be dependent on the industry, company and context. In the other extreme, companies may execute a consistent inconsistency through revolutionary design, which can create the basic recognition in some cases. In the other end, companies may execute tight consistency and find it the most feasible strategy. General guidelines on strategic use of consistency are hard to formulate. (Karjalainen, 2007)

2.2.5 DIFFERENTIATION AND DRAWING ATTENTION

Differentiation and attention drawing are two major goals of strategic use of visual design. Drawing attention means for example to be noticed in the shop, look new, draw attention through publicity and also surprise. Drawing attention is recognized in the marketing literature as necessary for deriving information from a product and memorizing this information (Greenwald & Leavitt, 1984; MacInnis and Jaworski, 1989). It is noticed, that the more the product differentiates from the other products, the more attention it will get. Also the novel and unexpected information, or surprise, can generates more attention than familiar and expected information, and can have a positive influence on how the consumers accept the products. Still it must be noted, that this influence does not imply that the consumer will always prefer the deviating product over the familiar ones. (Person et al., 2007)

Monö(1997) Proposed a three dimensional model on how designers make decisions on product differentiation, when designing new products. According to Monö, decisions are about the desired relations the product has on three dimensions: 1) company's present portfolio of products, 2) succession of previous products, and 3) products of the competitors. Warell (2001) applied Monö's model to design management and proposed the use of the model to position a product on the market. Building on Warell's and Monö's studies, Person et al. (2007) proposed a model of strategic styling directions between new and existing products. *Potential benefits of strategic styling decisions* (Person et al., 2007) is based on Monö's(1997) three dimensions, and discusses whether to design the product to look similar or different related to those dimensions.

The new product should look similar to the *present portfolio*, to create brand recognition, and communicate symbolic meanings with design. This is the strategy of companies with singular brand styles, like Ponsse, who need recognition for their narrow target groups. Designing the products different to other products in the portfolio can be used to draw attention and for

Figure 7. Fiskars General purpose scissors (www.fiskars.fi, retrieved 23.10.2013)

market segmentation. This is the strategy of for example Sony and Nokia who target different markets with certain products. (Person et al., 2007)

When compared to the *succession of product generations*, in other words what the product should look like compared to the previous products of the company, using consistency is a classic example of recognizable brands like Fiskars (figure 7). They reinforce their brand story and develop brand icons this way. Varying the design through product generations is used by brands like Toyota to update their visual identity to market changes. This kind of strategy allows adaptability to trends and repositioning as the market changes. (Person et al., 2007)

There are two examples of design strategies to design products similar to *products of competitors*: 1) companies that copy the style of other brands and 2) companies designing for category style, such as plates and other tableware. A modern example could be iPhone-accessories, which are often designed to follow the style of Apple to be recognized as an accessory for Apple products. Designing products very different from competitors is used for differentiation on the market to emphasize distinctiveness and foster recognition. (Person et al., 2007)

In their model, Person et al. (2007) propose similarity within all of these three dimensions to be used for establishing recognition and to transfer symbolic meanings. On the other hand, different visual design draws attention to the product. (Person et al., 2007) As noted by the authors, also numerous hybrid strategies between the extremes are found, and companies may use varied sets of strategic goals for their product styling. (Person et al., 2007)

2.2.6 VISUAL DESIGN IN PRODUCT SUCCESSION

Balancing between stability and change is natural in the way people solve problems. As noted earlier companies' main challenge in style management is finding the right balance. This section introduces the strategic use of visual design in the succession of product generations.

Stability essentially arises from people's natural desire for continuity and factors such as tradition and accepted working techniques (Person & Snelders, 2009). According to Karjalainen (2007), brands can become solid and unmistakable through consistent use of visual design features. Consistency in design also helps to foster visual difference from competitors, and product differentiation is what makes or breaks brands (Karjalainen, 2007). In the art world artists explore new techniques for expression driven by passion. Also the instinct to reject past practices and boredom to the old fosters change. (Ackerman, 1962)

As the companies, brands and the environment they act in change and evolve, so do brand styles. Defining how a company should develop its brand style is a complex task. In the sixteenth century Giorgio Vasari used the analog between developments in style and periods of human life. More recently the metaphor of design DNA has been used as a driving force behind the design attributes. These both ideas suggest a steady improvement of style, being heavily connected to personal and social progression (Person & Snelders, 2009). However, as Karjalainen (2004) pointed out, this analogue to brand style development is problematic. Evolution of a brand style may be more complex, ignoring some recent choices and taking references from the past, like Volvo did renewing the style of their products in the 1990s. They changed the recent boxy style of the cars to a more dynamic, muscular style. But in a fear of losing the recognition of the cars as typical to Volvo, they engaged some design elements from the curvier Volvo models from the 1950s (Karjalainen, 2004).

Sometimes the brand styles go through more rapid renewals, changing radically for example in the event of corporate fusions. Also, the brand style development may not be logical and the change of the style may be influenced by the change of technology, design philosophy, or control of the company (McCormack et al., 2003). Thus it is unlikely, that a brand style is progressing with a steady aim. Rather the style is in a state of constant reformation, and the work of designers on brand styles is tightly connected to the idea of market segmentation and product differentiation. Nevertheless, a recognizable brand style needs some sort of continuity, whether it is implicit or explicit. (Karjalainen, 2004)

As the visual identity of a product is intertwined with the functionality and technology of the product, it is natural that the change in technology may change the product aesthetics. James Dyson (the creator of Dyson vacuum cleaner brand) has stated that *"*if the product contains any new ideas then it is absolutely essential that the product be visually different*"* (Roy 1993, p. 429). It may be argued that all changes in products technology or functionality should cause changes in the visual identity of the product. Especially technological improvements are relevant, because they determine what is feasible to produce, thus giving boundaries also to visual expression on the product design. (Person & Snelders, 2009)

2.3 VISUAL PRODUCT DESIGN IN PRACTICE

Styling or design for visual identity has sometimes been discussed merely as superficial changes in form (Person et al., 2012). Sometimes this might be true, like in redesigning the aesthetics of a product for the next generation. This is common in the car industry, when making a facelift, or a change in the car's styling during the production run without a complete redesign. However, usually styling is entwined in form, functionality and technology of the product, and changing one aspect has an effect on another. (Person et al., 2012) For example, when using aluminum in a bicycle frame instead of steel, the frame tubing may have to be larger in diameter to gain the same strength, which affects the appearance. On the other hand, when finding ways to reduce the production costs or reducing the amount of materials used for a product, designers might simultaneously find a new distinct style expression for the product (Person et al., 2012). In the

product generations of the Porsche 911 model, the use of boxer engine and the constructional layout of having the engine in the rear of the car can be considered prominent characteristics of the product style, and the more decorative aspects such as the shape of the headlights has varied over time (Person & Snelders, 2009). In visual product design, form, functionality and technology are entwined, and when designers create the look and feel of the product, the work involved affects aspects well beyond just superficial changes. (Person et al., 2012) Consequently, design of the visual identity of products should be managed along with the other functions in product development, in order to fully control the formation of visual design identity.

2.3.1 THE ROLE OF VISUAL DESIGN AND DESIGNERS

The scope of design has changed significantly in the past decades. Designers are referred to as facilitators of the process or mindset of "design thinking", or as strategist in the company. They are found on great range of industries in separate design departments. Design and the work of designers have continuously been pursued on taking a broader role within companies and product development. The line between what is meant by design and technological development has blurred. Since the 1950's the role of design has become positioned as a process, and designers being positioned as the facilitators of a certain mindset within the organizations. This design thinking has been promoted to change the behavior of the whole organization. During the 1970', when design agencies like Total Design in the Netherlands changed the view in arguing the different forms their work could take and the relevance of it, design as a process became a dominant view in design. How outcome of the designers work, how the product looks like, had become secondary, and the interest of design moved toward managing the design process. (Van Winkel, 2006) But still, As Person et al (2012) state, "industrial designers are typically the only professionals with a specific responsibility (and training) to shape the look and feel of products" and "issues of styling remain a prime reason why companies contract designers." (Person et al., 2012).

Visual design activities have been seen as difficult to manage in the literature of management (Kotler & Rath, 1984). Studies from practice also suggest that during product development, the strategic potential of visual design is sometimes overlooked by the managers (Bangle, 2001). Many managers are lacking the basic knowledge of the work processes of designers, and there is not enough knowledge within the companies to discuss the styling issues properly. However, as styling of the products can be the key to success or failure, there is an apparent need for understanding and managing the styling process and designers more strategically. (Person et al., 2012)

2.3.2 USE OF DESIGNERS

Not all the designers are equally capable of creating a recognizable and coherent visual identity for the products. The personal design competence varies significantly in the profession that requires qualities like talent, vision and sensitivity for the design issues which are not inherent

for everyone. Regardless of the talents one possess, it takes training and experience to develop the skills needed for creating new products with appropriate look and feel. (Karjalainen, 2004; Warell & Nåbo, 2001). In developing visual identity for products, the skills and knowledge of the designer is crucial. Companies can influence this through hiring, but also internally creating an environment that supports the appropriate learning and view on the specific design task. For example Sony was able to respond effectively on lifestyle differences by placing industrial designers in its key markets. (Sanderson & Uzumeri, 1995) If design is outsourced, the competence may not be as controllable by the company.

Company's confidence on design and designers, and the amount of status the designers get, has a great effect on the ability to benefit from design in product development. The same goes to developing a successful visual identity for the brand. Some companies involve designers only in the later stages of the product development process, when the technology of the product has already been determined and developed allowing the industrial designer merely to create an appealing package for them. In companies conducting design-driven renewal, design is considered a core competence and a primary source of competitive advantage. Designers are involved from the beginning throughout the product development process, and have a key role in product definition, when it is determined what the product actually is. (Ravasi & Lojacono, 2004) To gain a general idea of designers role in a design driven process, Ravasi and Lojacono's are illustrated further in the following.

Ravasi and Lojacono(2004) suggest that, as the development and maintaining of the visual brand identity is closely linked to the development of a company's overall strategy, structure, power and control systems, it needs to be managed in line with the company renewal process. Ravasi and Lojacono's) studies on design driven renewal suggests two alternative conceptions. Some scholars conceive strategic renewal as a transformation process with a beginning and end. Within this process the company goes through several actions in order to find a more favorable combination of resources and capabilities. This process is typically started and driven by corporate leaders, and may be a rapid transformation from one configuration to another, or long-term, incremental process. A second perspective on strategic renewal, *renewal as continuous innovation*, is driven by technology and product innovation rather than by corporate-wide change efforts, and is being carried out on permanent basis. (Ravasi & Lojacono, 2004)

According to Ravasi and Lojacono, both of these perspectives may be needed to understand the potential contribution of design and designers to strategic renewal. They describe design driven renewal through a four-phase model, based on two interrelated processes supporting changes first at a product level , phase 1: generation of new ideas, and phase 2: evaluation and selection of ideas. The phases 3 and 4 happen on the organizational level, phase 3: revision of design principles, and phase 4: diffuse of new principles. (Ravasi & Lojacono, 2004)

In the first phase of generating new ideas, Ravasi and Lojacono (2004) suggest that the managers should give the designers a leading role in the process. For example in companies like Bang & Olufsen, Nokia and Apple, designers have a key role in generating new ideas and driving product innovation. In this phase, designers explore for new variations and bring them to the attention

of managers. This continuous innovation process results in periodic renewal of the products, reflecting the design philosophy of the company. (Ravasi & Lojacono, 2004)

The second phase consists of the evaluation of the designers' proposals and the decisions of rejection or approval of certain proposals made by managers. The selection decisions are made following certain criteria, like costs and revenues, fit with existing product lines or organizational features like technological and manufacturing capabilities. These criteria vary heavily across companies, and so does the involvement of managers from different functions. "Eventually the way this internal selection process is carried out heavily influences change and variety in product lines." (Ravasi & Lojacono, 2004) Most companies recognize this selection phase being crucial, few have actually any tools or procedures for combining the economic and commercial value of the proposals with the thorough understanding and value of the product styling to support decision making. Instead, decisions are often described as being based on intuition. (Ravasi & Lojacono, 2004) Tools such as focus groups, semiotic analysis and user observation may be used, but the final decision is often left to the judgment of managers, who may or may not possess the sensitivity and understanding of truly innovative concepts and styles. Therefore the manager's intuition in making decisions may be in direct contradiction with the designers intuition, which in this case would be the preferred opinion. For a generic guideline, Ravasi and Lojacono suggests that the managers should implement consistent product policies in decision making.

2.3.3 KEY PERSONNEL IN VISUAL DESIGN

In some companies, key persons are identified making the decisions and having a great influence or guiding the direction of visual product design. Visionary chief designers have been creating the brand policies or design principles, and guiding the execution of them, like Walter de'Silva first for Alfa Romeo and later for Audi, Frank Nuovo for Nokia and Jonathan Ive for Apple. Design managers such as Alberto Alessi and Esnesto Gismondi have personally led the product development and usually have the last word on decisions (Ravasi & Lojacono, 2004). Also at Nokia the design managers had a key role in making the core brand values understood and agreed on within the company and at Volvo the design director had a key role in pushing the design renewal forward to a new direction for the company, continuing work of the past design manager, who created the design features expressing the brand core values. (Karjalainen & Snelders, 2009) Similar stories are found in other companies, like BMW. The visual identity, continuity and coherence of design solutions and decisions in these companies rely largely on the personal taste, vision and sensitivity of these key persons. (Ravasi & Lojacono, 2004) In some companies, the project lead personnel are selected based on the new design actions required. For example at Sony, engineers lead the generational and incremental projects, industrial designers and market personnel lead topological projects. (Sanderson, Uzumeri, 1995)

2.4 BRIDGING LITERATURE TO STARTUPS

This literature review indicates that the basic idea of managing visual product design for strategic intentions is adaptable for a startup company. Company's core capabilities, strategic intent and a preferred brand image can be composed into a design philosophy, which can be formalized into product design using explicit or implicit design features. If the startup develops multiple products at the same time, brand recognition can be gained through consistent use of design features across the product portfolio. Among the well adaptable theories for a startup are the points made about drawing consumer's attention by differentiating from the competitors. However, the past theories are often based on studies of large corporations that already have a brand heritage. This means that the theories often have gaps if used to guide startups in their development of visual product identity. When creating a design philosophy or other strategic intentions in visual design, some past theories indicate that a startup has a lot of freedom, since it does not have to consider brand heritage or past product generations. However this also means that the past studies give less guidance in how to choose an appropriate strategy for a startup company. However, the studies indicated that the very first product of a company is the basis for brand recognition in the future. Therefore the consideration of strategic intentions in the visual product design should be very important for a startup.

The agile and unstructured nature of startup's product development process is favorable for managing the visual product design alongside the other functions of the company, in the way suggested in the literature. In a startup all the functions in product development are working together, so there are no information gaps between different functions. However, strategic management of visual product design in the way the literature often suggests, demands time, effort and expertise. The overall strategic intentions of a company, and the preferred brand image should be determined in order to compose a design philosophy before the actual product design. The past studies give little advice for startups on how to organize and manage the practices in product development process from the viewpoint of visual identity of the product. Some findings suggest giving a designer the leading role in product ideation. Also the competence of the designer should be considered to follow the needs of the company.

3 RESEARCH METHODOLOGY

To find out how visual product design is managed in the startup companies, I went to study them in real life. The research process was guided by the overall research questions: *how to manage the visual product design for commercial benefits in a startup company.* The empirical study aimed to seek answers to the case study questions:

How the startup companies manage the strategic intentions in visual product design?

How the practices and organization of the product development process influence visual product design in startup companies?

To explore case study question, a qualitative case study research was conducted. As phrased by Eisenhardt(1989, p 534), "case study is a research strategy which focuses on understanding the dynamics present within single settings". In the research I examined the strategies and practices that ultimately led to the visual identity formed in the physical product, in a setting of a startup company. Case studies are the preferred method when the "how" question is being posed, the investigator has little control over the events, and the focus is on contemporary phenomenon within a real-life context (Yin, 2009).

Based on the literature review I had selected themes generally affecting the way companies, by theory, are or should be managing the visual identity of their products. What had become clear was that formation of visual identity of a product is a complex phenomenon which often contains features that are not intentionally created. The aim of the research was to find these unintentional features, as well as the intentional ones.

Building up the case study research started from the initial questions raised by the literature review, which became the focused research questions guiding the research. A complete set of these focused questions is in the appendix 1. After the cases for study were selected, these questions were the basis designing the interviews and forming an interview guide. The detailed research methodology is explained in this chapter.

3.1 CASE SAMPLING

The aim of the study was to gain an overall understanding of managing the visual identity of a product in startup companies. Studying one case gives only the perspective of one startup operating in a certain market. Therefore multiple cases were needed. This section explains the use of theoretical sampling for selecting suitable cases for the study.

3.1.1 THEORETICAL SAMPLING

I used theoretical sampling method for selecting the cases for the study. Theoretical, or purposive sampling, is a method of selecting the cases based on the case qualities, not randomly. While cases could be selected randomly in qualitative research, it is not necessary, or even preferable. Purposive sampling focuses efforts on theoretically relevant and useful cases, which are supposed to extend theory. (Eisenhardt, 1989) Purposive sampling increases the likelihood of any possible phenomenon being represented in the data. In contrast, random sampling would be used to achieve wide variation in large sample size mostly in quantitative research. (Maykut & Morehouse, 1994)

First, based on the scope of this thesis, the following criteria were set to limit the case selection:

- The company is a newly developed, so called startup company
- The company develops and markets physical, industrially-produced goods
- The company has its first product generation on the market or announced and coming to market

Within these limitations, I selected the cases to get variation on product categories and background of the founders. I was also more interested in the companies with limited resources. In these cases the founders would have to rely more on their own expertise were, if they did not have the funding to hire or outsource all the knowledge needed in managing visual identity of the products. The limiting criteria were stretched with two otherwise interesting cases. Framgo had not yet announced its product, and the visual identity of the product was still in development. I wanted to include this case to have a direct view of the situation were the product's visual identity can still be altered considerably. In the other cases a lot of the discussion concerned the events in the recent past. This case gave a view where many of the decisions in visual product design are in the future. Beddit on the other hand had already marketed and sold several generations of its product, but the current products in question were the first one's for the consumer market, so it was interesting to see if this had an effect on how the company manages the visual identity of the product.

3.1.2 NUMBER OF CASES

Determining how many cases I needed to study was a question balancing the practicalities and getting enough data for analysis. It was acknowledged that the practical settings of this thesis research, would limit the number of cases that it is possible to include in the study. Ideally in case study research with multiple cases the researcher stops adding cases when theoretical saturation is reached. Basically you add new cases until you think there is nothing more to learn, and then add one more. When determining the number of cases in advance, according to Eisenhardt (1989), generally a number between 4 and 10 usually works well. With a fewer than 4 separate cases, unless the cases have several mini cases within them, it is usually difficult to generate a complex, convincing grounded theory. With more than 10 cases the complexity and

amount of data will quickly become difficult to cope with. (Eisenhardt, 1989) In this study the number of cases was not predetermined, but would become set during the case study period. However, twelve cases was set as a target number for getting a comprehensive set of different managerial practices on visual product design in startup companies.

3.1.3 PRAGMATIC CONSIDERATIONS

It is common that in practice the pragmatic considerations such as time and money limit also the number of cases, whether theoretical saturation is reached or not (Eisenhardt, 1989). In this case study research the possible challenges known before hand were time, season, and location. The overall atmosphere and trend in startup communities was supporting companies developing software, and the companies developing hardware products were a minority. One interviewee commented on the aimed number of cases: “you are lucky to even find 12 hardware startup companies in Finland”. The study was not limited to Finland, but for practical reasons it was reasonable to start searching for case companies here. Based on the comments from the participants, the startups companies in Finland also turned out to be more interesting for the study, because most of them had very limited resources compared to the beginning companies that could be found for example in Silicon Valley. Focusing in Finland also enabled to conduct enough interviews in a reasonable time for the study, and keep as many of the interviews face-to-face as possible. The interviews were set to take place during the summer 2013, so it was during the holiday season. This was acknowledged as a challenge for getting the founders to participate.

3.2 INTERVIEW DESIGN

A careful planning of the interview and preparation for the interview situation was crucial for the success of this study. Getting a truthful understanding of the companies’ practices in managing their visual product identity and the intentional and unintentional choices leading to the finished visual product design was needed.

First, there could be significant differences in how the interviewees comprehend some of the concepts and terms in question. The interview needed to be designed to find data of the same phenomenon within the startup company setting regardless of the interviewee’s background, experience and education. The theoretical knowledge of the interviewee might influence the terms that could be used during the interview, and how the certain concepts should be addressed.

Second, based on the complexity and different variations of the visual identity development processes found on the literature, and the lack of research done on the phenomenon in a startup company setting, the different ways of managing the visual identity of a product could not have been predicted. Thus the interview should be exploratory and open to allow free

conversations about the subjects in question considering the particular case setting. The interview design should allow a deeper conversation on the arising issues.

Third, the themes affecting product's visual design by theory vary widely from product development practices and company structure to intentions on creating meanings and communicating the company values. The interview should have a structure and cover the predetermined themes to allow a comparable analysis between the cases.

Semi-structured interview was used as the primary data-gathering method for the study

3.2.1 SEMI-STRUCTURED INTERVIEW METHOD

Semi-structured interviews are well suited for the exploration of the perceptions and opinions of respondents regarding complex issues and enable probing for more information and clarification of answers. The varied professional, educational and personal histories of the sample group prevent the use of standardized interview schedule (Barribal & While, 1994). In a standardized interview, wording and sequence of all questions are exactly the same for each respondent to make sure that any differences in the answers are due to differences between the respondents rather than in the questions asked. (Gordon, 1975) In standardized interview method, the objective is to standardize the stimulus, and it is necessary that the respondents share the same vocabulary and that every word has the same meaning for every respondent. In contract, a semi-structured interview schedule allows the change the words without altering the meanings of the questions, and it acknowledges that not every word has the same meanings to all the respondents. The validity and reliability of semi-structured interview does not depend on the use of the same words in each question, but on gaining a common understanding. (Barribal & While, 1994)

3.2.2 PROBING

In addition to allowing the choice of wording to each question to obtain the equivalence of meanings, the semi-structured interview allows the use of probing. (Barriwal & White, 1994) Probing means the use of predetermined or improvised questions used in the interview situation to guide the conversation and to get a deeper understanding on the subject.

In the interviews in this study the objective was to find out strategies and practices in the company setting as truthfully as possible, in other words to get a replication as close to the real life situation as possible. However in the interview research, the data is subject to the interviewee's interpretation of the real life. It should be taken into consideration that there might be a difference in how the interviewee thinks the things should happen, or how theory suggests that they should happen, and how they are actually happening. As Denzing (1989) has suggested, there is often an attempt to present a self that meets the demands of social desirability. The respondents answer what they believe is the preferred response whether it is

true or not. Probing maximizes the interactivity between respondent and interviewer which helps to reduce the risk of socially desirable answers (Barribal & While, 1994). In this study probing was used to get the interviewee acknowledge the product design features in the company's product and talk about the development of the features, and not about the interviewees understanding of a preferred or right way of developing a visual identity of the product.

3.2.3 INTERVIEW GUIDE

I designed an interview guide to be used in the interview situations with the company representatives. I loosely followed the general procedure for developing an interview guide or an interview schedule presented by Maykut & Morehouse (1994). Focus of inquiry was defined by the previously mentioned, detailed research questions, found in appendix 1. The themes in the questions contain broad open questions like "What goals do startups have in product styling efforts?", observational questions like "Are the managers aware of the design issues?" and factual questions for example about product history. They were carefully studied and different ways of accessing this data were brainstormed. Similarities were grouped together as the possible *categories of inquiry* (Maykut & Morehouse, 1994). The categories gave the interview a structural logic starting from finding the company, then going from more general themes about the business model towards more specific themes that by theory, affect the generation of visual identity of products. The initial categories of inquiry were:

1. Finding the startup
2. Value proposition
3. Organization
4. Visual product design
5. Managing visual identity
6. Future products
7. Brand core values

The question settings and wording in the categories were further brainstormed to:

A. Have the wording understandable regardless of the interviewee's prior understanding of design literature. For example, instead of talking about "visual identity of the product", I used wording like "look and feel of the product".

B. Be open and general enough to force the interviewee to think about the meanings of the concepts that are discussed and avoid the simple yes or no answers.

The questions were tested and further improved to avoid the three major pitfalls in developing questions for a interview research presented by Maykut & Morehouse (1994): the closed questions, the unclear or vague questions and the complex questions. The final questions were used as lead questions, which I presented in all of the case interviews, still allowing the change

in wording in the interview situation if I felt it was necessary. In the interview guide I listed two types of probing questions to lead the conversation:

1. Questions to further open the lead question if the interviewee did not understand my point.

2. Questions focused on certain issues, if the answers for the lead questions were too broad or did not consider the specific issues important for the research.

As an example, one lead question in the category of Managing the visual identity was “How do you make the decisions of how your products should look?” and an example of a probing question after that: “Who was involved in the decision making, and why?” Example of the interview guide document can be found in the Appendix 2. Between the interviews the interview guide and preset probes were modified based on the experience I got from previous interviews, and to suite the next case in question based on the company profile. In addition to the preset probing questions I asked improvised questions in the interview situation based on my observation of the interesting or important issues arising. Generally the aim was to foster the conversation and make the interviewee talk as much as possible.

3.3 ENTERING THE FIELD

When preparing for the interview situation, I needed to consider the relation between me and the interviewee. An open and honest interaction was needed in accessing the needed data. A qualitative researcher needs to set oneself into the position of the subject, as if being an insider (Maykut & Morehouse, 1994). At the same time, I needed to be aware of my own preconceptions and biases. The success of gaining valuable information or a view of the insider, requires an interactive and transparent situation with trust and openness between the researcher and the respondent. Things that might harm gaining a fully working collaboration in the situation are for example differences in ethnicity, gender, socio-economic status, education or age. Self-presentation of the interviewer can largely overcome these issues, when things like dress, etiquette and manners are carefully thought considering the respondent. (Barribal & While, 1994)

When conducting social research, the participating people are often more concerned with the researcher and what kind of person he/she is than with the research itself. They are trying to weight if the researcher can be trusted, whether he could offer companionship or perhaps how easily he could be manipulated or exploited. (Silverman, 2010)

I tried to maintain a neutral or positive observer status when talking about the designs of the interviewed companies or other issues when I was aware that my own biases or comments could affect the interview situation or the gained understanding. Sometimes this was impossible, if during the interview the interviewee asked my opinion for example on their design.

3.4 DOCUMENTATION

The documentation on the field included pen and paper note taking, photography and audio recording. It was acknowledged early in the study that the quality of the study was highly dependent on the interviews. In the interview situation I wanted to give all my focus in conducting the interview, and keep myself alert for arising findings and themes, that could be discussed more deeply by guiding the interview with additional probing questions. Therefore I did not put much effort on hand written note taking during the interview situation. I wrote down only the particularly interesting points and hints of findings that arose. However the tools for taking notes became very important during the interviews, when in many cases the interviewee wanted to clear up their story with drawings or charts drawn on paper. For my personal documentation, I used pen and paper mostly right after the interview situation to write down the first impressions and key points I recalled, as well as things I observed during the interviews, such as the interviewees interest and attitude towards the research and the research topic in general.

To keep my focus on the situation, the primary documentation method was audio recording. In some cases I used a camera to document the products or mock-ups we were discussing about. If not used in the thesis paper, the pictures helped me in analyzing the data, when I use visual material instead of only descriptions of the design features.

3.5 WITHIN CASE ANALYSIS AND IMPROVING THE INTERVIEW GUIDE

Within case analysis gains familiarity with data and preliminary theory generation (Eisenhardt, 1989) In this research preliminary analysis of the interview data guided the direction of the research during the case study period, and helped to gradually build an inside understanding on the phenomenon of managing visual identity of products generally on the field of startup companies. It gave both an overall picture of the subject, and some directly appearing patterns and hints of some interesting findings, that were later on taken into closer consideration.

Overall the interview guide and technique worked very well. One concern was that the questions gave parallel answers, as in some of the first questions the interviewee tended to tell a conclusive story from founding the company to a finished product. Nevertheless, this gave a good opportunity to go deeper in the subjects when they came up again later in the interview. Sometimes the conversation followed more naturally in a different order than was planned, and the interview guide was adapted on the go. For instance when asking about how the company develops its products the interviewee might talk also a lot about how the visual identity of the product generated, so deeper questions about the visual identity were discussed, before proceeding to the planned order. Also the leading questions were adjusted according to situation and how deep understanding the interviewee seemed to have of the topics.

After the first interviews the recordings and field notes taken during and after the interviews were carefully transcribed. When listening to the audio recordings a few times, some issues in

the interviewing technique were improved for the next interviews, such as wording and response to arisen themes. After considering the gathered data, and what seemed to be relevant in it and comparing to the literature the interview design was based on and the research question, the interview guide was taken into review. Some changes were made to the interview guide between the first few interviews to focus the following interviews better. Also the specific cases were considered based on the case backgrounds and some changes were made on the interview guide when necessary. According to Eisenhardt(1989), it makes sense to take advantage of emerging new line of thinking by altering the data collection, if this is likely to better ground the theory or to provide new theoretical insight.

3.6 DATA CONFIRMATION AND CONFIDENTIALITY

After the data gathered by interviews was analyzed thoroughly, text citations and data tables were sent back to be reviewed by the interviewees to confirm validity, and for a possibility to fill gaps in the data. This helped to confirm the data and correct some data errors and therefore increased the validity of the study.

3.7 DATA ANALYSIS METHODS

In the analysis phase of this research, inductive, theory building approach, a grounded theory method was used. In grounded theory method, theory is inductively derived from the study of the phenomenon it represents.

First the interview data was transcribed carefully. After that the data was unitized, meaning that the units of meanings were selected from the data, and next coded in to give every single unit a code for further recognition and analysis.

Next started a method described as cross-case pattern search using divergent techniques. According to Eisenhardt (1989, p533) this method “forces investigators to look beyond initial impressions and see evidence thru multiple lenses”.

In the analysis the coded units of meanings were laid on a same document called Wall of meanings. The first level analysis was conducted using this document, and finally writing the categorized data into a codebook. The next step was a systematic analysis where the data was digitized into a master chart document, giving every occurrence of a unit of meaning a digit in the chart, per category, and per a case studied. Through systematic analysis of this data, a deeper level analysis and findings were gained.

3.7.1 DATA PREPARATION

I gathered all the case data in the same documents where I transcribed the interviews. During the transcription I made preliminary unitizing to mark the early findings and help conduct the next stage of the analysis.

The next step was unitizing the data, taking the chunks or units of meanings out of the text entity. I modified the technique described by Maykut & Morehouses(1994) in which all the transcribed text giving one meaning is put on cards for the next phase of data analysis. I used the same documents containing the transcribed data for unitizing, to have all the source data in one place. The units of meanings were condensed versions of parts of the text. After that I coded the units of meanings in the source data file per case, page and unit. Additionally used color coding to aid visually perceive patterns and relations in the next phase of analysis.

3.7.2 FIRST LEVEL ANALYSIS

I placed all the boxes of units of meanings on a big canvas in Adobe Indesign. When placing the boxes on the on canvas, I started to arrange them in categories, which described one phenomenon the particular units of meanings belonged into. When a new unit was introduced and did not belong to any category, a new category was created. After placing all the units on the wall, the categories were rearranged, changed and combined, and placed under bigger categories that described one entity of phenomena. Also a single unit of meaning could belong to multiple categories. The categories and units of meanings were constantly compared to each other, categories refined again, and relations and patterns searched across categories. This process is called constant comparative method and results in understanding of people and settings being studied. (Maykut & Morehouses, 1994)

After refining the categories on the wall of meanings, the categories were organized in a logical order simultaneously searching new opportunities for improvement. After having the categories and their sub categories in an order, the categories relevant to the research were written in a codebook, a document listing the categories with their names, a description of the data and phenomenon the category holds, and examples of the units of meanings leading to formation of such a category. This was done with all the categories and subcategories under them, giving a full list of the first level findings of the analysis, with the rules of inclusion for units of data, and example justifications for such findings.

3.7.3 SYSTEMATIC ANALYSIS

The first level analysis gave an answer to the question, how are the startup companies managing the visual identity of their products, and the clear patterns and correlations were found based on the researchers intuition, which developed in gaining the understanding of the phenomenon

being studied. To find out more correlations, possible causations and the deeper meanings in the data, a more systematic way of analyzing the data was introduces. This would also demonstrate a justification for the findings, and strengthen the grounding of the emerged theory to the source data.

All the data used for the final data analysis was laid on a chart document, with the case companies represented on the columns, and the categories and subcategories on the rows. The wall of meanings was used as the source of data for the first layout of data occurrences. When a case company was represented in a specific subcategory, it was marked on the chart.

The single units of meanings on the wall of meanings per the categories that were used for analysis were market on the chart, started a next round of quantifying the data. Until this point, all the categories were formed based on the units of meanings appearing from the source data. Although, because of the nature of a qualitative research and the methods used in this study, there is a change that not all the case companies were necessarily represented in the categories they should be represented in. For example, “Important design features identified” is a category which was formed when units of meanings that pointed out the interviewee identifying specific design features in their product design came out, when asked what is important in the look and feel of their product. In the first level analysis it was possible that some units of meanings were missing from some categories without having an effect on the previous phases of data analysis. In this phase all the units of meanings under certain category were significant, so after the chart was finished based on the wall of meanings, the source data was studied again to find possible missing information. Also during this process the categories were refined again, so further on it differs from that used in the codebook. The main data chart was divided into three main categories: Company background, Product strategy - what they do, and Practice - how they do it. The research findings follow this categorization.

3.7.4 HOW THE CHART WAS USED

Placing all the units of meanings in a chart allowed for systematic comparison between different categories of data. First all the categories were quickly compared with each other to support and verify the earlier first level analysis and its findings. Next, to analyze the practical settings of visual identity management deeper, the following categories were taken into a closer consideration: Product development processes, use of professional industrial designers and decisions on visual design. All the subcategories of these categories were inspected closer one at a time, by highlighting the columns of companies which followed a certain category. This way the relations on other categories per these sets of companies were found systematically, without the possibility to overlook something.

4 CASE BACKGROUNDS

In finding the suitable case companies and their contact information, I used several web-sources, contacted startup incubators around Finland, and used contacts at Aalto Design Factory and other Aalto University- and personal contacts. Some case companies were recommended by other startup founders I interviewed. After finding the companies, I did a preliminary background research to confirm suitability for the study and to prepare for the interviews.

All the companies were contacted via phone and the topic and goals of the research were explained. It was also informed that it is possible to take part anonymously, so that the name of the company or the respondent could not be identified. Further, the possibility to review the data before anything would be published was informed. The interviews were settled to be held either via phone or preferably face-to-face when it was possible (8 face-to-face, 5 via phone).

From the participating companies I asked for the interview preferably a founder of the company, or someone who knew the product development process well from the very beginning. 10 of the interviewees were founders or co-founders of the company, two had been taken aboard in the very beginning of the company, and one was a second CEO in the company.

This chapter aims to a brief introduction of the company characteristics that are noteworthy considering the management of visual product identity.

4.1 CASE 1 – CATCHBOX

Company founder	9/2012
Time of case interview	20.6.2013, 09:00-10:00
Place of case interview	Design Factory, Otaniemi, Espoo
Interviewee	Pyry Taanila, Designer, Founder

CASE DESCRIPTION

CatchBox is founded by four entrepreneurial minded Aalto University students from the desire to build something own to work for, and show people that it is possible to employ oneself. Their product offering is a world's first throwable microphone for the audience. It can be used in events to allow a less intimidating way for the audience to take part in the conversation. The product idea was chosen for further development after considering other ideas, and was validated to have business potential in Summer of Startups, which was followed by founding the company in 2012.

Figure 8. Catchbox (Pyry Taanila)

4.2 CASE 2 – BEIBAMBOO

Company founder	9/2009
Time of case interview	26.6.2013, 11:06-12:00
Place of case interview	Via phone
Interviewee	Nina Ignatius, founder, graphic designer with a background in branding and design

CASE DESCRIPTION

Beibamboo is a company developing clothes for babies, with product lines targeted at hospital- and consumer use. The company was build after the founder's personal experience of having a premature born child, and realizing the lack of functional and user friendly clothes for the hospital use. She designed a product that would better fill the needs of the babies in hospital, and that are developed with the babies needs in mind.

Figure 9. Beibamboo (www.beibamboo.com, retrieved 30.9.2013)

4.3 CASE 3 – FUTUDENT

Company founded	9/2011
Time of case interview	27.6.2013, 09:45-11:00
Place of case interview	Futudent office, Helsinki
Interviewee	Niko Rusanen, founder

CASE DESCRIPTION

The company was founded after noticing the lack of video material in the education of dentists, and developing an idea of a small camera for video capturing and sharing the dentists operations. After following the technical development of the needed components for several years, the product idea was brought to Startup-Sauna when the small enough components started to be in the feasible price ranges. After validating the business potential there, getting a working place at Design Factory in Otaniemi, and a funding from Tekes, the company was founded. Their product offering is a video camera for the dentists, which can be used during the operation and controlled with a foot pedal. The camera is connected to a sharing service, where the video is easy to review with the preset markings, eliminating the time consuming process of editing, and to share for others, with discussion and other capabilities.

Figure 10. Futudent (www.futudent.com, retrieved 30.9.2013)

4.4 CASE 4 – FRAMGO

Company founded	10/2012
Time of case interview	28.6.2013, 10:00-11:00
Place of case interview	Framgo office, Espoo
Interviewee	Kenneth Salonius, founder

CASE DESCRIPTION

Framgo is a Aalto University student-found company developing a wearable device that takes pictures of the human fat- and muscle tissue, and presents that to the user for accurate monitoring of the effects of working out. The product idea came from noticing the trend of people trying to lose weight by working out but quitting because they don't see the effects quick enough and therefore lose interest in working out. They believe that a problem is in the method of monitoring the effects mainly by measuring weight, which in many cases doesn't drop in the beginning when people start working out. Although they lose fat tissue, they gain muscle tissue at the same. The solution is the company's product which illustrates the changes in human body tissue with real pictures, not just numbers, to motivate the user. The company's product development is still in a prototype phase, with no clear definition of the visual design.

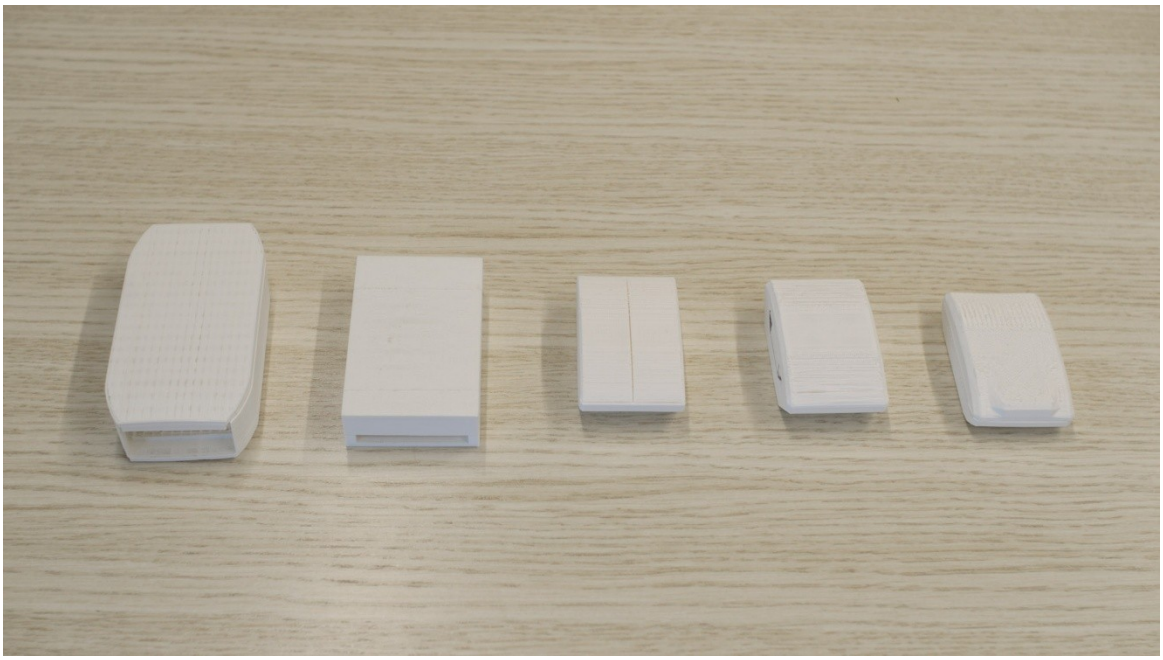

Figure 11. Framgo, photo taken of the early prototypes, from the oldest on the left to the current one on the right. (retrieved 28.6.2013)

4.5 CASE 5 – ZETA DESIGN

Company founded	4/2012
Time of case interview	2.7.2013, 09:00-10:00
Place of case interview	Zeta Design office, Design Factory, Otaniemi, Espoo
Interviewee	Eero Virros, founder

CASE DESCRIPTION

The company's background starts from the founder designing a staircase for his own house, after noticing the lack of pleasing solutions on the market. After leaving from the work in Nokia, the company was founded around the same staircase idea. After good feedback from both the customers and design experts, the characteristic z-form design of the product has visually remained very similar, being part of the recognizable brand identity.

Figure 12. Zeta Design (www.zeta.fi, retrieved 30.9.2013)

4.6 CASE 6 – UPLOUD AUDIO

Company founded	8/2011
Time of case interview	2.7.2013, 13:00-15:00
Place of case interview	Cafeteria in Punavuori, Helsinki
Interviewee	Tuukka Kingelin, designer, founder

CASE DESCRIPTION

Uploud Audio got its start from the founder's interest in hi-fi, which led to building his own sound systems. He had the capabilities and know-how for building hi-fi products and saw a problem on the market, which finally led to founding the company with other members. There was a lack of user friendly speakers which would fit well with the interior design, and the founders saw an opportunity to develop something for that demand. The product is a speaker that is acoustically more forgiving with the placement in a room compared to traditionally designed speakers. It also appeals with the plain design which would not stand out in home. The product idea was in Summer of Startups in 2011, but since that the product concept has changed to fulfill the user needs in a more simple way, with minimized use of technology.

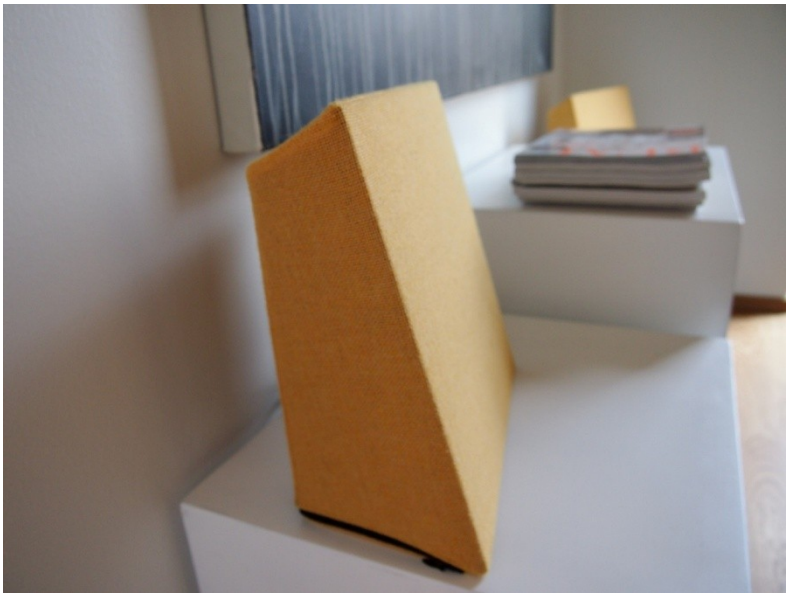

Figure 13. Uploud Audio (www.uploudaudio.com, retrieved 30.9.2013)

4.7 CASE 7 – JOLLA

Company founded	4/2011
Time of case interview	4.7.2013, 13:00-13:15
Place of case interview	Jolla office building, Helsinki
Interviewee	Marc Dillon, founder

CASE DESCRIPTION

Jolla was founded by the people, who were developing a new software platform Meego and the previous Maemo for Nokia, after finding out Nokia was no longer going to use it. The company is developing a mobile operating system Sailfish, and a mobile phone using the system. The company uses an agile product development process from software development side, which is fundamentally different to the traditional process used at Nokia. Additionally the company's idea has been hiring only the best people in the world and trusting them in development and decision making, without hierarchical organization. The company and its product is a challenger on the huge and highly competed smart phone market. The product differentiates with a unique, modern user experience combined with a distinct product design. Ability to personalize the product is a main driver in design, combining the capabilities of personalizing the physical device and software with integrated solutions. Half of the physical device can be changed to introduce additional functionalities, like camera flash and links to content that can be used in the device. Little details in visual product design are driven by this twin sided idea, like the jin&jang shape in the corners of the device.

Figure 14. Jolla (jolla.com, retrieved 23.10.2013)

4.8 CASE 8 – BEDDIT

Company founded	10/2006
Time of case interview	11.7.2013, 13:00-14:30
Place of case interview	Beddit office, Espoo
Interviewee	Lasse Leppäkorpi, founder

CASE DESCRIPTION

Beddit is developing a product for tracking the human vitals during sleep, and informing the user how to improve the quality of sleep. The latest product version consists of a slim sensor which is unnoticeably in the bed, and user interface in a mobile application. The company's founder was a researcher in Aalto University studying ballistocardiography. His colleague developed a sensor fitting his research area, and they build a business plans on top of that. Two of the business plans were in Venture Cup. The other plan was in top ten, and the other won the first price. The company has been developing its product around the sensor through different versions, for both consumer and business markets. Work of industrial a designer was involved in the latest models, which are targeted at the consumer market.

Figure 15. Beddit (www.beddit.com, retrieved 23.10.2013)

4.9 CASE 9 – POWERKISS

Company founded	10/2008
Time of case interview	12.7.2013, 13:30-14:40
Place of case interview	Powerkiss office, Helsinki
Interviewee	Peter Sazonov, UX manager

CASE DESCRIPTION

Powerkiss got started from an idea of the founder, who was studying design in Aalto University. The product idea was developed in the PDP course of Aalto University, and the company founded after that in 2008. The product is a wireless charging system with a receiver and transmitter for mobile phones. Unlike its competitors, the company bases its product development highly on designing the user experience as good as possible with iterations of test circles with prototypes. The product concept, is a result of this testing process and the design vision of the company's founder. An iconic ring shape of the product is an essential part of the brand identity and creates the unique user experience which differentiates the company from its technology oriented competitors.

Figure 16. Powerkiss, (www.digitoday.fi, retrieved 30.9.2013)

4.10 CASE 10 – FILMME

Company founded	12/2011
Place of case interview	Via phone
Interviewee	Lauri Salovaara, founder

CASE DESCRIPTION

FilmMe is founded by experienced people with backgrounds in media business, corporate management, entrepreneurship and hardware engineering and two of them having worked for Nokia in the past. FilmMe is an automatic camera system for horseback riding that detects and follows the user with zooming. It consists of a tracking system and a camera, which are installed for example on the walls of a riding hall, and a personal wrist band used by the rider, which is used for tracking the rider's whereabouts. The video is automatically uploaded on a web service, were the user can view and share it through a personal user account.

Figure 17. Filmme (www.filmme.tv, retrieved 30.9.2013)

4.11 CASE 11 – MIRAGEBIKES

Time of case interview	18.7.2013, 14:20-15:15
Place of case interview	Via phone
Interviewee	Tatu Lund, CEO

CASE DESCRIPTION

Miragebikes is a spin off from a serial entrepreneur family. The company got started when the former CEO, who had a personal interest on recumbent bicycles, met Timo Sairi, whose innovation the product is based on. The product is a recumbent bicycle with no chains that are normally problematic in recumbent bicycles. Instead of chains the bike uses a cardan sharft drive, which is unique on the market. The bike is designed by the co-founder Timo Sairi, with functionality and ergonomics driving the design.

Figure 18. MirageBikes (www.miragebikes.com, retrieved 30.9.2013)

4.12 CASE 12 – CIEGUS

Company founded	8/2009
Time of case interview	22.7.2013, 15:00-15:35
Place of case interview	Via phone
Interviewee	Kari Paukkeri, founder

CASE DESCRIPTION

The company was founded to commercialize product idea. Company's product offering is for health care control product for outpatient care. The physical product discussed in this study is part of the medicine control solution. It is used to make sure there is some device to remind the patient in doing certain things, and is approved for medical use. The company founders have worked for Nokia before founding Ciegus, and use a product development process directly adopted from Nokia, which was familiar to them.

Figure 19. Ciegus (www.ciegus.com, retrieved 30.9.2013)

Figure 20. Ciegus (www.ciegus.com, retrieved 30.9.2013)

4.13 CASE 13 – SONOLUX

Company founded	2/2012
Time of case interview	28.8.2013, 13:00-14:00
Place of case interview	Via phone
Interviewee	Mikko Sundman, audio engineer, founder

CASE DESCRIPTION

Sonolux develops interior design friendly hi-fi speakers. The design aims to hide the technology and give a new function to speakers. The speakers function as a wall lamp, and every product is mass customized according to customer preferences. The company was founded by two audio engineers from Nokia, because Nokia was reducing people and they wanted to make a living with their expertise.

Figure 22. Sonolux (www.sonolux.fi, retrieved 30.9.2013)

Figure 21. Sonolux (www.sonolux.fi, retrieved 30.9.2013)

5 RESEARCH FINDINGS

Startup companies in this study have interesting and inspiring stories behind them and their unique products. Why their products look like they do, is a sum of a complex phenomenon involving intentional and unintentional strategies, practices and decisions, hard research and – not that rarely – pure luck. This chapter aims at pointing out the most influential things that were found when seeking answers to the question: *Why the product looks like it does?*

All the interviewees in this study thought product's appearance was important or very important. Still the interviews gave a colorful set of thoughts about the importance and meaning of strategic potential of visual product design. The approaches in managing visual product identity varied in the definition of strategic intentions and how the product development process forms the final visual identity of the product.

All the companies had put efforts on the visual aspects of their products in product development. This was evident through the use of professional designers, and the intentional visual identity development. However, having a clear idea about the core company- or brand values was not that common within startups. Therefore manifestation of these values in the visual design in a way the literature suggests was found to be somewhat problematic. How the product should look like was often given more brain work, and what the brand is representing was thought as something that becomes clear in time.

The study focused at examining three aspects that were seen potential to influence visual identity of a product: 1) company background, 2) strategies the startups had in their product offering, and 3) practices they carried out in the product development process. Analyzing *product strategy* started from the type of product companies were developing, and went deeper into the strategic intentions they had towards the visual design of the product. Strategic management of visual identity was found to be quite undefined in the startup companies, in some cases without clear intentions. How the strategic intentions were actually put into the product design, and what unintentional things influenced the product's visual identity, were analyzed through the practices the companies had in the product development process. The capabilities of benefitting from a strategy in visual design in these processes were also found to vary. Some reasons for different approaches in the strategic intentions in visual design, and how the visual design developed in practice, could be found in the backgrounds of the companies. Figure 23 illustrates the scope of the findings.

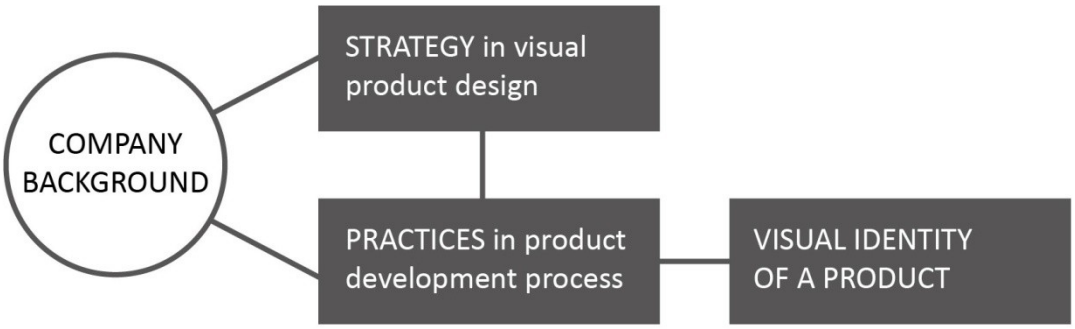

Figure 23 Main areas of research findings forming visual identity of a product.

In this study, the practices forming visual product identity were taken into closer examination, because they were found to have a high influence in the capability to formalize the strategic intentions in product's visual identity. Often the product development practices were also the main influence in visual product identity, as the strategic intentions were not that clear. The most influential of these practices were:

1. The type of product development process
2. How the professional industrial designers were used
3. How the decisions on visual design were made

From the findings of the case study interview, three types of product development models were noticed. Although all the product development processes of different cases were unique, the models were defined in order to understand the meanings of the choices made in the practical level of product development process. The generated models are based on characteristic examples that were noticed in the study. From the three types of product development models, a continuing cycle of ideating/research, prototyping and testing the ideas, was found to constantly create the most distinct and unique visual identities in this sample, in terms of differentiating from an existing product genre. The other two product development models were found to possibly have challenges in the management of visual product identity. Within these processes, the key questions in strategic management of visual product identity were found in: *how the professional designers are used* in shaping the appearance of the product, and *how the decisions on the visual design are made*. The following sections aim to clarify the broad area of the findings in this study, starting from the company background in chapter 5.1. Chapter 5.2 discusses the strategies towards product's visual identity, that came up in the interview study. Chapter 5.3 gives an overall look at the practices found influencing visual product identity on its way in product development. The following chapters go deeper in examining the three aspects that were found the most influential in formation of visual product identity: the type of product development process (5.4), how and when industrial designers were used during the process (5.5) and how decisions on visual product design were made (5.6). The problems and challenges interviewees described in their visual product design efforts are presented in chapter 5.7, and finally, chapter 5.8 aims at making a meaning for the important findings of this study.

5.1 COMPANY BACKGROUND

All startup companies have the human personalities behind them. The personal backgrounds and experience of company founders are the basis determining the way a company is functioning and how it is being managed. Therefore this is the first thing defining the way design and visual identity of a product is developed and managed.

With thirteen companies participating in this research, there were thirteen different and interesting stories behind founding the companies, and many more passionate people creating those stories. The characteristic things in the company backgrounds that were seen potential to influence the management methods of visual product identity in the companies are summarized in table 1.

	CATCHBOX	BEIBAMBOO	FUTUDENT	FRAMGO	ZETA DESIGN	UPLOUD AUDIO	JOLLA	BEDDIT	POWERKISS	FILMME	MIRAGEBIKES	CIEGUS	SONOLUX
COMPANY FOUNDERS													
Designer founder/inhouse designer from start	●	●	●			●	●		●		●		
Founder used to work for Nokia					●		●			●		●	●
Aalto University student/researcher backgr.	●		●	●		●		●	●		●		
Enterpreneurial background			●	●			●			●	●		
THINGS INFLUENCING FOUNDING													
Start-up incubators etc	●	●	●	●	●	●		●		●			
Product idea to business plan					●			●	●			●	
Personal interest to product idea						●			●	●	●		
Self employment to produc idea	●												●
Need on the market to product idea		●	●	●						●			
Having all the good things for a start-up							●			●			

Table 1. Summary of the company backgrounds and things influencing founding that could explain different approaches in the management of visual product design. For explanations of the categories, see appendix 3.

Four factors emerged when categorizing the personal backgrounds of the company founders, summarized in table 1. In six cases a founders was a professional designer, leading to a situation where a designer naturally has a high position and status in the company. As mentioned in the literature review section of this paper, this should give these companies a good starting point for strategic management of visual product design. Similarly in Jolla, an experienced designer had been taken aboard very early, and was seen as an important asset for determining how the company is developing their products:

"…the guy has set very important standards which basically reflect how the whole rest of the company needs to work in order to make sure that we have something that is really exceptional." (Marc Dillon, Jolla)

Although all the companies had different stories behind them, six characteristic things were found influencing or pushing them from the beginning. Startup incubators influenced or enabled the birth of most of the companies. Startup incubators, programs and facilities in Otaniemi (part of Espoo where most of the Aalto University is located) were influencing six of the companies, which was a natural cause of the practical choice in this research to collect many of the company contacts through these networks.

The factors relate to how the story originally started. It may have started from a product idea, personal interest on the specific product genre, or by recognizing a need on the market and creating a product idea to fulfill that need. Simply the need or desire to employ oneself was the main catalyst before anything else in two cases.

Different backgrounds of the companies were found to be explaining some of the differences and similarities in the way companies manage the visual identity of their products. Having a designer as a founder had a great impact on the consistent consideration of visual issues throughout the product development process and the capabilities in manifesting the strategic intentions of the company in visual design. Startup incubators were also found to influence the processes and use of design in the companies.

5.2 PRODUCT STRATEGY – WHAT THEY DO

Deciding what kind of product the company intends to develop is the basis for further strategies in visual identity design. Analysis of what kind of strategies the case companies had in the visual design of products started by mapping out companies' product offerings. Also it varied between the companies, at which point the product idea was decided in the first place, and how much it defined the core identity of the products. Although this was not intensively studied, there were some noticeable cases. In Zeta Design the visual identity of the product was very much defined before founding the company, because a staircase model the founder designed for his own house was the basis of the company's product design. Also the product idea behind MirageBikes had been designed quite far, also in the visual concept level before founding the company.

There were seven companies developing only a physical product, the others combining the product and software with a visual user interface in web- or mobile application. In these cases the visual identity of the product offering contains both the visual design of the software application and the industrial design of the physical product. This study, as well as the interviews, focused only on the visual identity of the physical product. How the visual design of the software interface was managed was not discussed, unless issues came up directly affecting the visual identity of the physical product. For example developers at Framgo did not want any physical buttons in the product, which was a major decision considering the user experience of

the product. The product would have had a different visual identity if it had only one visible button in it. All this was made possible with the mobile application, so consequently the functional design of the software had an influence in the visual identity of the product. For Beddit the decision to shift from using an internet service to a mobile application had a fundamental consequence on the visual identity of the product. Before this shift the product had had a separate device which needed an internet connection. This device had been connected to a sensor which was in bed, with a cable. Use of a mobile phone application allowed the company to remove the connectors and antennas for internet connection and replace them with a Bluetooth connection to the mobile phone. Together with other technological changes this allowed all the electronics of the device to be combined with the sensor into one single device, which was unnoticeable in the bed, only needing a power cord instead of a separate device on the night table (figure 24).

Figure 24. The previous development version of Beddit (left) and the new version using a mobile application. (www.beddit.com, retrieved 30.9.2013)

At Jolla the software development continued from what had been started with the development of Meego mobile operating system at Nokia. Therefore the core of the software design was there already when the development of the physical product started. The majority of the company staff was software people, but they had a chief designer guiding the design process of both the physical device and the visual interface of the software.

All the physical products presented in this study have their own distinct visual identity. How the products looks like, what the appearance communicates and how it is perceived by their target market could be intensively analyzed. How good the visual design is in selling the product and implementing company's strategy - the success of the chosen design features - will ultimately be judged on the market. However, these were not the important questions in this study. Instead, the strategic intentions behind the visual identity were concidered. As shown in table 2, three types of strategic use of visual design were recognized in the study, based on the interview data: 1) General strategic intentions behind the visual design, 2) Strategic use of certain design features and 3) Strategies on product succession.

	CATCHBOX	BEIBAMBOO	FUTUDENT	FRAMGO	ZETA DESIGN	UPLOUD AUDIO	JOLLA *1	BEDDIT	POWERKISS	FILMME	MIRAGEBIKES	CIEGUS	SONOLUX
PRODUCT OFFERING													
High tech product	●		●	●			●	●	●	●		●	
Technology product					●	●					●		●
Clothing		●											
Product only	●	●			●	●			●		●		●
Product + software			●	●			●	●		●		●	
B to C		●	●	●	●	●	●	●		●	●		●
B to B/organisations	●	●	●		●			●	●	●		●	
STRATEGIC INTENTIONS IN VISUAL DESIGN													
Communicate the company vision	●				●	●							
Intended meanings in design	●	●	●	●		●	●	●	●		●	●	●
Creating recognition	●	●			●			●	●	●	●	●	
Differentiation with visual design	●				●		●	●	●				
Differentiation with usability/UX	●	●	●			●	●		●	●		●	
Implement designers personal vision						●				●			
"Design to make it look good"				●	●			●		●			
STRATEGIC USE OF DESIGN FEATURES													
Important design features identified	●	●	●		●	●	●	●	●	●	●	●	●
Design features inform the user	●	●		●		●	●		●				
The product is customizable	●	●			●	●	●						●
Design enables branding	●	●					●			●		●	
User experience guides design features	●	●				●	●	●	●		●		
Functionality guides design features		●				●	●	●	●		●		●
STRATEGIES IN PRODUCT SUCCESSION													
Continuity with implicit features	●		●								●		
Continuity with explicit features			●		●	●						●	
Continuity through technology/functionality								●			●		
Old product as an example											●	●	
Having the same designer												●	
Listening to customers					●				●				
Using design guidelines								●		●		●	
No clear plans for future product styling	●							●			●		●

Table 2. Product strategy – Summary of the strategic intentions in use of visual design, that became noticed in the case study interviews. For explanations of the categories, see appendix 4. (*1: the issues of product succession were not discussed)

General strategic intentions in visual design were the values, visions and meanings described to be intentionally manifested in the visual design in a more general level. In some cases, a clear company vision was communicated with visual design. For example at Catchbox this is driving the product design, and for example the cube shape, soft materials and vibrant colors aim to follow the same purpose:

"...what we aim at (with the look and feel of the product), is as far as possible from the current microphone-world. With that we aim at a soulful and lively product and getting people interested in it. When it's in the events, people wonder what the hell is flying up there and what is that. It brings smile at people's faces – I want to try that so I have to make up a question – And this happens all the time in the seminars. …And when you think about the company's bigger vision, our aim is not to make people throw better, but to get the people really take part and discuss, get active in these events." (Pyry Taanila, Catchbox)

"...mihin me pyritään(tuotteen ulkonäöllä), on mahollisimman kauaks tän hetkisestä mikrofonimaailmasta. Nimenomaan sillä just pyritään saamaan sielua ja eloa tuotteeseen ja ihmiset kiinnostumaan siitä tuotteesta. Ku se on tuolla tapahtumassa ni jengi kelaa et mikä helvetti tuolla lentää ja mikä toi on. Se nostaa ihmisille hymyn kasvoille. "Mä haluun kokeilla tota ni on pakko keksiä joku kysymys." Ja tätä tapahtuu koko ajan seminaareissa. ... Ja ku aattelee meiän firman isompaa visioo, mitä me halutaan ei meiän tavote oo tehä ihmisist parempii heittäjii, vaan meidän tavote on saada ihmiset oikeesti keskustelemaan ja ottaan osaa, aktivoitumaan näissä tilaisuuksissa." (Pyry Taanila, Catchbox)

In two cases the implementation of designer's own vision was recognized as influencing the visual design. At Uploud Audio the designer was a founder of the company and wanted it to be visible in the product, that he had designed them. This resulted in that the company's design philosophy followed his personal design philosophy:

"-…why does the product look like it does? -…I like minimalistic design. And then I want the product that I have made to look like I have designed it. It comes from there. Why the product has to look minimalistic? Well I don't like such attention-seeking items and those touting themselves…" (Tuukka Kingelin, Uploud Audio)

"-...miks tuote näyttää siltä kuin se näyttää? -...tykkään ite minimalistisesta designista, ja sit mä haluun että itsetekemä tuote näyttää meikäläisen suunnittelemalta. Et sieltä se lähtee. Miks tuotteen pitää näyttää minimalistiselta niin mä en pidä semmosista huomiohakuisista esineistä ja semmosista jotka tyrkyttää itteesä..." (Tuukka Kingelin, Uploud Audio)

Creating recognition and differentiation were clear strategies behind the visual design. Also differentiation with usability or a unique user experience was seen as a strategy in visual design, because it consequently affected the visual appearance of the product. It was not clear in all the cases if the potential of visual design to support this kind of differentiation was intentionally utilized. However, when there were intentions found in improving the usability or user experience, those were always somehow connected to the visual design intentions. A good example of exploiting visual design features to create a unique user experience was Powerkiss, where intensive user testing had specifically resulted in the ring-shaped design concept. First the company had tried a more traditional rectangle shape for their product, which would have

been a more natural choice from engineering point of view. However in the user testing, although the technology was working fine, the use case was not working. The users were positioning the receiver part of the charger wrong over the sending part. By altering the visual appearance of the product, a better solution was found. The interviewee described the born of the ring-shaped concept like this:

"We realized we need to have kind of a sight-target paradigm. Then it was born basically on the idea of a dot and a circle aiming at the dot. We tested with prototypes at Design factory… … made rapid prototypes for testing and asked people to try it out. We videotaped and observed how it works, and realized there is something into the dot and sight… …But this was how the concept was born, a way of marking the active charging area on the table, and a way to get the user understand how it is supposed to be used. How it is supposed to be placed over it." (Peter Sazonov, Powerkiss)

"Todettiin että jollain tavalla pitäis saada tähtäin-maalitaulu tyyppinen paradigma, ja se sitten syntyi siitä että miten jos laitetaan ihan että piste ja ympyrä joka tähtää siihen pisteeseen. Testailtiin protoilla design factorilla… …tehtiin pikamallit joilla testailtiin, pyydettiin kokeilemaan. Katottiin miten se toimi ja kuvattiin ja todettiin että tässä on jotain että on piste ja tähtäin... …Mutta tämä oli miten se konsepti synty, tapa millä merkata se aktiivinen latausalue pöydällä, ja tapa millä saada käyttäjä ymmärtämään miten sitä kuuluu käyttää, miten se kuuluu asettaa siihen." (Peter Sazonov, Powerkiss)

The potential of visual design to communicate symbolic meanings was used noticeably within the companies. Meanings like simplicity and the feeling of high quality were commonly described guiding the visual design. Almost all the interviewees described meanings that were intentionally used as a guiding principle in visual product design.

Strategic use of design features defines the companies' design management strategy more specifically. Generally all but one of the interviewees described strategies in visual design that were somehow specified through the use of design features. The visual design of Framgo's product was so unfinished at the time of the study, that there was no fixed design features yet. Still the interviewee described intentions in the use of visual product design:

"…but the first impression usually always comes from the appearance of the product. It must be very simple. How it works must be understood by looking at it. That's why we have been aiming at slightly similar things to the heart rate monitor belt. Probably a very large part of Finnish people know how to put on a heart rate monitor belt." (Kenneth Salonius, Framgo)

"...mutta se ensimmäinen "first impression" tulee kuitenkin aina yleensä siitä tuotteen ulkonäöstä. Se pitää olla hyvin yksinkertainen. Se pitää ymmärtää katsomalla miten se toimii. Siks me ollaan pyritty siihen vähän sykevyömäisyyteen että kaikki, luultavasti hyvin suuri osa suomalaisista tietää miten laittaa päälle sykevyö." (Kenneth Salonius, Framgo)

In a similar way some other companies used design features to inform the user in how to use the product. Powerkiss implemented a dot and sight paradigm in the design, which was used to help aiming the product properly over the charging transmitter. Catchbox made a round and raised part for the microphone to indicate where to speak when using the product (figure 25).

The other way around, a preferred user experience or functionality was found guiding the intentional formation of visual design features. Comfort for the baby's skin was very important in the design philosophy Beibamboo had in their clothes. To maximize the comfort, there are as few seams as possible, and all the badges have been placed on the outside. These practical choices gave a unique look for the clothes. The functional choices had not been tried to hide, but for example the seams that are on the outside were intentionally emphasized with a colorful logo-ribbon (figure 26). This had not only been used for product differentiation, but also to emphasize the reasons behind the design choices: maximizing the comfort. She also said that the most important thing in their product's appearance is that it looks comfortable.

Figure 25. Design feature of catchbox microphone indicating where to speak. (Pyry Taanila)


Figure 26. Beibamboo logo ribbon (www.beibamboo.com, retrieved 30.9.2013)

Few of the companies had clear strategies in the succession of visual design over product generations. This was described as a thing that a startup does not really have time to think about. Some interviewees did not feel like they should think about the look of future products at this point, as Tatu Lund described:

"First we need to get this business running and if this works out, it gives us the justification to speculate with this kind of things. We are in a way too early stage for that conversation." (Tatu Lund, Miragebikes)

"Ekaks pitää saada tää bisnes jalkeille ja jos tää onnistuu tää homma niin se antaa meille oikeutuksen spekuloida näillä. Me ollaan ihan liian aikasessa vaiheessa siihen keskusteluu."(Tatu Lund, Miragebikes)

There were still recognizable strategies or practices that considered the visual identity in product succession. Uploud Audio had well thought plans to extend the product line in the future in a way that the current speakers would not only look similar, but also work acoustically together with the future products. The design features were planned to be used to support the product philosophy of long lasting products in a way that one could buy the speakers today and extend the speaker system with the future products. And they would all work together and look coherent. Having clear idea of the company's core values or design philosophy was not common within the startup companies, but when such statements had been given a thought and manifested in the visual product design, it can be seen as a way to manage the visual identity in product succession through implicit design features. For example, although Pyry Taanila from Catchbox said they did not really have time to think about strategies on the appearance of

future products, he also said they try to keep the core values: distinctiveness, playfulness and freshness in the look of the next products. In some cases the practicalities were bringing visual continuity in the products, like the use of same technological or functional solutions or having the same designer creating the next product. Also customer feedback was seen as a tool for determining which design features were good in the current visual design and would be kept similar, and what should be changed.

5.3 PRACTICE – HOW THEY DO IT

The product design identity is a result of the new product development process. The practices of the company, model of the product development process and the choices made during it determine what kind of product the outcome would be, and how would it look like. Whatever the strategies, values or philosophies behind the design are, the practical settings of the product development process are what create the physical form of product identity. In this study, the product development processes of the case companies were examined from the perspective of visual product identity. Three types of general product development models were defined based on the interview data: 1) Idea/research-prototype-test –cycle, 2) Design before engineering, and 3) Engineering before design. The models are the foundation determining how the core of the product's visual identity is formed and how it develops until the product is finished. The different product development types reflect the company's capabilities in strategic development of product's visual identity, and the founders' thoughts towards it compared to the other activities. Within the process, the *use of professional industrial designers* was examined. The sample of the companies gave a good view on the use of designers, as there were a good number of cases using outsourced designers, as well as designers as founders of the companies. When it comes to making decisions about products visual attributes, four different *decision-making models* were found. The models vary from one person dictating the decisions, to more democratic models where more than one person has their say, to letting the user testing rule in decision making. These main areas of the findings in company practices leading to the visual product identity can be clarified with figure 27.

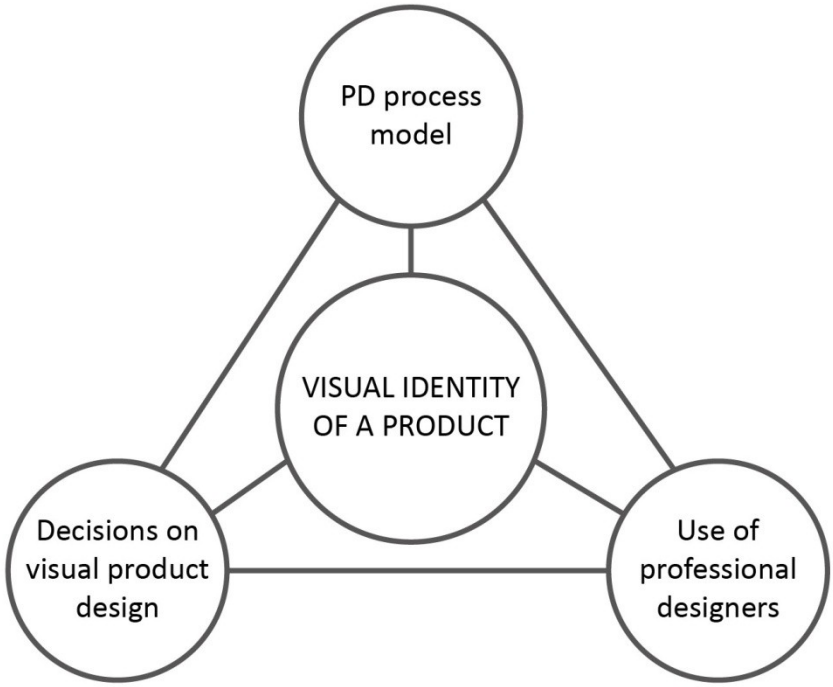

Figure 27 Main areas of findings in company practices leading to the visual identity of the product.

The *different product development* process models, *use of professional industrial designers* and the *decision-making models* are discussed further in the following sections. Before going to those main findings, we take a look at the other practices that I found to be noteworthy in the development of the visual identity of product in startups.

In most of the cases there was a clear separation of creating the product design concept, which was done by industrial designers, and the engineering development following that, done by engineers. How the design concept was followed through engineering divided the companies with others aiming at keeping the fixed design as similar as possible, and the others being more flexible in changing the design to accommodate to technological or financial challenges. For Beibamboo, the founder's dedication in keeping to her design choices, regardless of how the manufacturing workers would have preferred to change the design, was very important in making the product distinctive and as good as it is. In this case the people from the manufacturing side who were professional in sewing the clothes were comparable to the manufacturing engineers on the other cases. Also she was determined to keep the original design although there certainly was ways to make the manufacturing cheaper. These practices resulted in a distinct visual identity for the product that got positive feedback from the users, and supported the brand story, as the founder of Beibamboo, Nina Ignatius described:

"Functionality has always come first. Especially when I gather these patterns together, in other words lay the clothes flat in pieces, they are not the easiest (for manufacturing) but they are cut to a form which enables to sew them with the least amount of seams. Also this is not always the most economical use of the fabric. There may be more leftovers than when cutting straight pieces next to each other." (Nina Ignatius, Beibamboo)

" Kyllä se on se funktionaalisuus ollu aina ykkösenä, et varsinkin kun kerään nää meidän kaavat, eli kun otetaan palasiks vaatteet ja katotaan litteenä, niin ne ei oo helpoimmasta päästä mut ne on leikattu sellaseen malliin että ne saa niin vähillä saumoilla kun mahollista kiinni. Niin se ei oo myöskään aina ekonomista tehdä sen kankaan suhteen. Voi olla että jää enemmän jämäpaloja kun jos leikkais vaan suoria kappaleita vierekkäin. Mutta se oli meillä päätös että tehdään se vaate niin hyväks kun mahollista eikä se tuotanto niin halvaks kun mahollista." (Nina Ignatius, Beibamboo)

"The manufacturers hated that I wanted it (the zipper) to be sewn on top of the cloth. I said it is softer from the inside this way, when there is no edges. Because of this the sewing was twice as long and quite difficult. But I said just do it, I am paying you by the hour. And this has also been credited and enables something to tell about the product." (Nina Ignatius, Beibamboo)

"Sit se että mun ompelijathan inhosi sitä et mä halusin ommella sen vaatteen päälle. Koska sanoin et sit se on pehmeempi sisältäpäin kun ei tuu niitä reunoja. Niin se teki kans semmosen kaksinverroin pidemmän ompelun siitä vetskarista ja aika hankalan. Mut mä sanoin et tehkää nyt vaan, et mä maksan teille tuntipalkkaa. Että sekin on saanu kiitosta ja myöskin tehny sen että siitä vaatteesta on jotain kerrottavaa." (Nina Ignatius, Beibamboo)

On the contrary, Tatu Lund from MirageBikes said that the use of as many ready-made, sourced parts and solutions as possible was a wise choice for them. This practice cut down the manufacturing costs, in the expense of having a "perfect artistic freedom" in visual design. Through this practice, the specific details and separate parts that are visible in the product could be found as well in products of other brands using the same manufacturers. The only part specifically made for the company was the main part body of the bicycle. Otherwise the visual identity of the product consists of the sourced parts, and the unique configuration of them. This case shows well that a distinct visual identity for a product is possible to achieve with a heavy use of sourced, visible parts. Some differences between the companies' approaches could be explained by the different demands in manufacturing and sourcing. For example the molding costs when creating new parts may be very high.

In three cases the separation between design of the appearance and engineering development could not have been made, but the two were developed parallel. These companies had been influenced by start-up incubators in Otaniemi, so the practices in product development may had been learned from there.

Utilization of user feedback or user studies for visual product design varied significantly within the companies. The capabilities of user testing in creating innovation were maybe not always understood similarly. For some companies like Catchbox and Powerkiss, user tests were a crucial part of the development process instead of a tool for just evaluating the final designs. The purpose of the testing was to quickly validate the ideas in a realistic situation with rapid prototypes. In this process, the visual identity of the product was ideated throughout the product development process, and tested in realistic use case situations. Therefore the user testing was an important tool defining the visual identity of the product. Opposite view for this was that what the consumer wants may be totally different at the time the product finally comes on the market, than when the tests were made:

"I have carried out some consumer tests in my previous working life at Nokia, and somewhat question the benefit they give… …Usually you fail, if you conduct a consumer test and ask the

consumers what they would like to have, work for two years and make that kind of product. Then the answer usually is –you fool, that's a poor product. Sure I would have wanted that product two years ago, but not anymore. – That's really difficult. Often the best ideas are found when you manage to make a good forward thinking guess." (Tatu Lund, MirageBikes)

"Olen aikasemmassa työelämässä Nokialla tehny jonkin verran kuluttajateustausta ja vähän kyseenalaistan sen miten niistä on saavutettavissa hyötyä... ...Usein sillon mennään pieleen jos järjestää kuluttajatestin ja kysyy että mitä kuluttaja haluais, sitten teet kaks vuotta duunii ja teet sellasen tuotteen. Niin sillon se vastaus yleensä on että höhlä, tuo on ihan huono tuote. Kyllä mä oisin kaks vuotta sitten halunnu tuollasen tuotteen mut en mä enää haluu. Se on hirvee vaikee. Yleensä parhaat oivallukset löytyy kummiskin kun onnistuu tekemään hyvän eteenpäin nojaavan arvauksen." (Tatu Lund, MirageBikes)

At MirageBikes, user testing or asking for feedback was not used as a tool for specifying design features. Instead the company followed the market and user feedback on a more general level, seeking for weak signals of the customer needs.

Both companies that used a product development process model in which prototypes were repeatedly tested in realistic situations with outside users, Catchbox and Powerkiss, had managed to create distinct products that look unlike anything on the market. For both the feedback from user testing had revealed flaws in their previous product ideas, and fostered the generation of form factor which in both cases became also a core of the visual identity and an iconic part of the brand differentiation. For Catchbox it is the cube shape of the microphone, for Powerkiss the ring shape of the receiving part of the wireless charging solution. Both look unique, but still make perfect sense in the use case. First, this indicates that the company's own revolutionary vision of how the product should look like can be successfully evaluated in a realistic use case situation. Second, innovative and distinct-looking products can be developed through user testing. Also the resulted visual identity may work better than the appearance the designers would have chosen in the first place. This is how Pyry Taanila explained the generation of the look of Catchbox's throwable microphone:

Figure 28. Powerkiss charging receiver. (retrieved from techmymoney.com, 23.10.2013)

"That has been asked a lot (why the product looks like it does) and it has born as a result of long tests and experimentation. We have done a hell of a lot of prototyping with the physical form and colors and everything. Naturally we started with ball shapes and some shapes with maybe a handle, and something that resemble a cross between a microphone and a ball. Things like that. But it quickly turned out to be a challenge to have any protruding parts like handles. It's seen as a frightening object coming at you when you throw it. That was clearly a bad thing. Then the ball, good thing about it is that it is a very universal shape and felt as playful and everyone knows what a ball is and what you can do with it. But on the other hand it is maybe too playful and we wanted to restrict a little bit so that it wouldn't be only for playing and we still wanted to keep it somewhat product-like. Also a ball is difficult to manufacture. The advantage of this (cube) is

that we can easily commercialize it. As a funny detail, we realized during the testing that a ball is harder to catch than a cube, which is logical considering the crabbing surface you have here." (Pyry Taanila, Catchbox)

"Tuota paljo kysytään(miksi tuote näyttää siltä kuin se näyttää) ja se on pitkien testien ja kokeilujen tuloksena syntyny. Tehty helvetisti prototypointia fyysisellä muodolla ja väreillä ja kaikenmaailman jutuilla. Luonnollisesti aluks lähettiin kokeileen kaikkii palloja ja sellasia muotoja missä on ehkä joku kahva ja mitkä muistuttaa mikrofoonin ja pallon risteytyksiä ja tällasia. Mutta niissä osoittautu nopeasti olevan haasteita jos on jotain fyysisiä ulokkeita niinku kahvoja ni kun sitä heittää niin se koetaan tosi pelottavana esineenä joka tulee sinua kohti, siinä on selkeesti huono puoli. Sitten pallo on, hyvä puoli siinä on että se on tosi universaali muoto ja geometrinen ja semmonen että se koetaan leikkisänä ja kaikki tietää mikä pallo on ja mitä sillä voidaan tehä. Mutta toisaalta pallo on vähän ehkä liian semmonen.. haluttiin vähän rajottaa sitä ettei siitä tuu niinku sekoboltsi juttu että jengi alkaa riehuu sen kanssa ja että ei tuu mikään peliväline pelkästään, että se vähän säilyttää tuotemaisuuttansa. Ja samoin pallo on myös aika vaikee valmistaa. Tässä meillä on etuna että pystytään tuotteistaan tätä tosi helposti. Semmonen hauska yksityiskohta että kokeiluissa todettiin että pallo on vaikeempi ottaa kiinni kuin kuutio, ja se on ihan loogista kun mietit tossa on paljo enemmän tavallaan tasasta tarttumapintaa." (Pyry Taanila, Catchbox)

In some cases user feedback and focus groups were also used to support decision making in the visual design questions, and finalization of the product appearance. However arguments arose also against asking the users for decisions on visual design. Tuukka Kingelin from Uploud Audio described it as escaping the responsibility, if you outsource the deeper level decisions in visual design. Beibamboo was using a lot of comments from the users for product improvement, but the founder made the decisions based on her own vision.

"Usually I have made it based on my own view. If you try to please everyone else, it won't be distinctive anymore" (Beibamboo, Nina Ignatius)

"Ja yleensä mä oon sit tehny niinku mä oon itse sen nähny. Et jos yrittää miellyttää kaikkii muita niin siitä ei tuu enää erikoinen."(Beibamboo, Nina Ignatius)

Also Jolla has a similar approach. Instead of intensive user surveys, they rely on the talent of their designers.

Different practices that were based on the interview data found influencing the formation of visual product identity in the case companies are presented in table 3.

	CATCHBOX	BEIBAMBOO	FUTUDENT	FRAMGO	ZETA DESIGN	UPLOUD AUDIO	JOLLA	BEDDIT	POWERKISS	FILMME *1	MIRAGEBIKES	CIEGUS	SONOLUX
PRODUCT DEVELOPMENT PROCESS													
Idea/research - prototype - test -cycle	●	●							●		●		
Design before engineering			●				●	●	●				●
>PD with a factory partner											●		
>New development through customer cases					●								
Engineering before design				●								●	
*Development process from Nokia												●	
USE OF PROFESSIONAL INDUSTRIAL DESIGNERS													
Founder/inhouse from the beginning	●	●	●			●	●		●		●		
Outsourced industrial designers			●				●	●	●	●		●	●
Planning to use outsourced ID				●									
Ext. ID involved in the early stages of pd			●				●			●			●
Ext. ID involved in the last stages of pd			●				●	●	●	●		●	
Concidered working with a famous designer		●			●								
Important to have a competent designer							●	●		●	●		
Product appearance is important	●	●	●	●	●	●	●	●	●	●	●	●	●
FOLLOWING DESIGN CONCEPT THROUGH ENGINEERING													
Aim to keep the fixed design		●	●					●	●				
More flexible to change the design in the pd							●			●	●		●
Design and technology developed parallel	●				●	●				●			
HOW DECISIONS ON VISUAL DESIGN ARE MADE													
1 person making decisions		●	●		●		●		●		●	●	●
Democrazy + 1 person	●									●			
Self organized/democrazy				●		●							
According to feedback								●					
Intuition guiding the design decisions	●					●			●	●			
USE OF FEEDBACK/USER STUDIES													
User feedback/testing a crucial part of the pd	●				●				●				
Feedback for decisions and finalization of design								●		●		●	
Feedback used for design improvements		●				●				●			
Do not ask users for decisions		●				●	●						●
Do not ask users during product development			●								●		

Table 3. Summary of the practices, which were (based on the interviews) found influencing visual product identity. Inclusive explanations of each category can be found in the appendix 5. (*1 PD process model was not discussed)

Through the following sections of this paper I use the concept of *strategic capabilities of visual design.* The concept determines the potential capability to manifest the strategic intentions from theoretical level into the actual visual design of the product. Visual design in this context is the *act* of creating product appearance intentionally. As the findings in the literature section chapter of this paper indicate, the link between strategy and product formation is considered strongest when a professional designer is involved in the product development. This was also indicated in the findings of this study, as the designer was most often seen as the creator of product appearance. The strategic capabilities are stronger when there are fewer things fixed that determine the form of the product, and weaker when the form factor is already determined. This is for example when the physical dimensions or component placements of the product are determined. Figure 29 illustrates how the strategic capabilities of visual design form a boundary in the product development practices between the strategic intentions and practical formation of visual identity of a product.

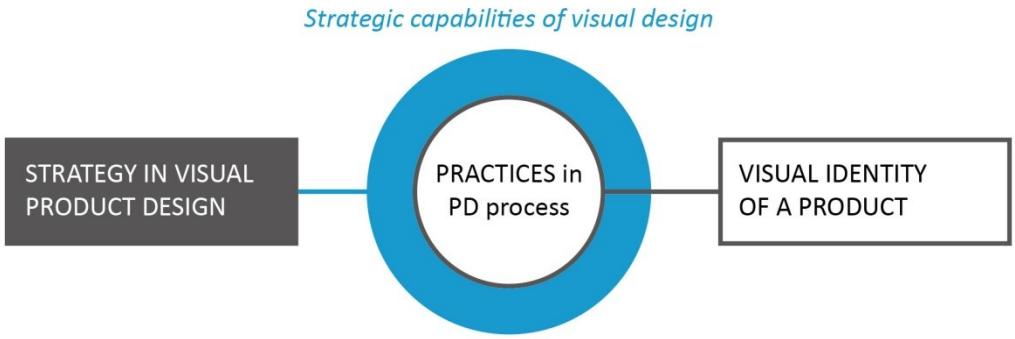

Figure 29 Strategic capabilities of visual design in the practices of product development(PD) process.

5.4 PRODUCT DEVELOPMENT PROCESS

Differences in the product development process model were found to play an important role in the companies' strategic use of visual product design.

As noted earlier, the processes were generalized in three types of process models: *Idea/research-prototype-test – cycle, Design before engineering*, and *Engineering before design*. It must be noted that these models were not created to illustrate clear boundaries in the practices if individual companies, but rather point out the characteristic features among the study sample that were found to influence visual product design based on the interviews. From these model types, the strategic capabilities of visual design went deepest into the products visual identity with the *Idea/research-prototype-test –cycle* process model. The capabilities remained shallower in the *Engineering before design*- model of product development process. It can also be argued that with the same strategic intentions in product design, the outcome would look very different with the different product development processes. The following sections aim to clarify, how the research findings were indicating these remarks.

5.4.1 IDEA/RESEARCH – PROTOTYPE – TEST – CIRCLE

Four companies were found to use a similar type of product development process, which could be described as iterative process, going through a circle. The process starts with market research or ideation for concept or design features of the product. The ideas are prototyped in order to validate them in a realistic use case situation. The prototypes for testing have been more or less functional, in some cases with the MVP, minimum viable prototype principle. This means building as little or as fast as possible to be able to test and validate a certain idea. Based on the test results the circle goes back to ideating for improvements for the concept, prototyping the improvements and testing them. During the circle typically the engineers and industrial designers worked together, so that the visual design features and the technology were developed and tested simultaneously. The key from the viewpoint of visual product identity was how the product appearance was considered from the beginning through all the iterations. The design process of the visual design, the work of industrial designers doing it, continued together with the engineering design instead of an intensive industrial design phase before or after the work of engineers. In this process model the intentional efforts in implementing a visual design strategy are not restricted by predetermined engineering decisions.

The development process was described as unstructured, and progressing on trial and error basis. The companies also seemed to have non biased, open minded thinking in using visual design and how it should be determined. This resulted in products having design features and visual solutions that had not been done by other companies on the market.

Similar to all the companies executing this type of product development process was that they had a designer as a founder and their product offering was a physical product only, so there was no software development involved. The designers were in a major role in making design decisions. In three cases the designer was basically making the decisions that comes to look and feel of the product. And although the decisions were made together in the one remaining case, the designer was having a stronger word and guiding the design with his vision.

In the product development process of these companies, usability and user experience had been emphasized and were the driving forces also for visual design. Also the strategic capabilities of visual design had been well noticed by the founders. The companies were found to intentionally communicated symbolic meanings with design features, and used visual design to create recognition for the brand. Three companies having parallel products in the product portfolio were not intentionally differentiating the products visually from each other. Whether this was a strategic choice or not did not come clear in the interviews.

Based on the interview data, these companies had different views on how to integrate the development of visual design and engineering when compromises needed to be made, or when finalizing the product to meet the demands of manufacturing. At Beibamboo and Powerkiss the visual design was dominating. The best form for the product was defined and the engineering should change that as little as possible. At Beibamboo this meant allowing higher production costs instead of giving up any principles in the design. For example the zipper was sewn on top

of the cloth although the sewing took double the time this way. At Powerkiss, engineering followed a bit behind the visual design in the last stages of product development process. Design was finalized for the best user experience and appearance, and finalization of electronic design had to fit into the given form. MirageBikes was more flexible with the planned design in order to make good use of sourcing.

Based on the interview data, these companies also had different practices and thinking on user feedback and user studies. Two companies used testing throughout the development process for validating and improving the prototypes. One was found to take user comments and feedback for design improvements, but emphasized making the decisions according to the founders own vision, rather than the user feedback.

As seen from the different practices between companies, this type of product development model was quite loosely defined, and the four companies were categorized together by generalizing things, and also based on the idea of design and design methods as ruling the product development process. Powerkiss and MirageBikes had somewhat separated the visual design and engineering processes, so they were also considered in the second process type: *design before engineering*. Key things in this process model were the constant and intentional development of product's visual identity through the process, and validating the ideas by building and prototyping. This process model created distinct and unique looking products in the and further, the visual design of the products was tested to work before product launch. Although the product development processes had been described as informal and unstructured, the connection between strategic intentions in visual design and the practical work of product development was kept all the way through the process. The nature of this process type seemed to be ideal in taking advantage of the freedom and agility of a small startup company for creating distinct visual identities for products. Here the advantages of being a startup company are discussed by Tatu Lund from MirageBikes:

"I would say an absolutely positive thing from the product development viewpoint in this kind of startup is the ability to work really agilely and quickly with a small and informal organization. And there are no corporate rule-books telling you how to make decisions or which process to follow, or some rules on doing things and placing logos etc. In these things a startup usually has the perfect freedom and flexibility, and there really is no need to practice some milestone meetings. We follow – these days the popular - ,agile methods. So, we use informally, naturally,agile methods." (Tatu Lund, MirageBike)

"Sanoisin että yks tämmösessä startupissa tuotekehityksen näkövinkkelistä ehdoton plussa on että kun organisaatio on pieni ja epäformaalinen niin pystytään tekemään hirveen ketterästi ja sutjakkaasti ja ei ole mitään korporaatio-ohjekirjaa joka sanelis että päätökset pitää tehdä tällä tapaa tai että tämmöstä prosessia noudattaen tai jotain sääntöjä että näin pitää tehdä, logo pitää printata tonne ja niin pois päin. Näissä suhteissa on yleensä startupissa täydellinen vapaus ja joustavuus eikä tarvi harrastaa mitään milestone meetinkejä varsinaisesti, että mennään... nykyään tullu muodiks, puhutaan ketteristä metodeista. Niin käytetään epäformaalisti, luontevasti ketteriä menetelmiä." (Tatu Lund, MirageBikes)

5.4.2 DESIGN BEFORE ENGINEERING

In five cases the product development process was found to more or less start with design, and the engineering followed the fixed industrial design concept, determining the visual design. Either in-house- or external designers were creating concept options, from which the company eventually made a decision and with varying amount of options and iterations, the design concept was fixed.

All these cases were found to have some level of strategic management of visual design, by pointing out important design features in their product design, and having intended meanings behind these features. Although some of the companies had internal designers, all of these case companies were using outsourced designers in visual product design.

The case companies had different views on integrating the design concept and engineering. Three of them aimed to follow closely a fixed design, others companies being more flexible to change the design if it is in contradiction with the technology development. For the more flexible companies, the design concept was not representing a fixed master requirement. The product development process at Jolla to finalize the product was described like this:

"There is a constant stream of these things that are constantly managed. When you have.. the antennas we talked about, you have to be careful if you want metal on the outside then you run simulations and then you hope you got it right when you push the button to do a manufacturing run. Where the big things are, how is the display presented in the device, is it properly centered, how is the border outside. Where is the camera and the flash in the device. Is it in a good location. Where and how you access the battery and the sim card. Where the keys are where the connectors are. These kinds of things are a constant issue where you put them where you want them and then you find out that the best hardware that you get, they should be somewhere else. Then you start to mitigate that, then you have a compromise, then you start to mitigate the compromise to get closer to what you wanted in the original design. And then at the certain point the schedule and everything else presses upon and you go with whatever the current set of design compromises can be. In this case I think we got exceptionally close to what the original idea was." (Marc Dillon, Jolla)

Within the interviews of these companies a high appreciation towards the work of industrial designers and value of design often came up. The process type and these companies could be described as design driven. This process type gives freedom for the designer in shaping the look and feel of the product. It also gives a lot of responsibility for the designer, who in some cases can make or break the success of the products visual identity. Although the responsibility may lie on the designer, a lot of the successful development of visual identity may depend on the company's ability to follow or build upon the design concept. The strategic intentions in visual design should be somewhat known before giving the job for the designer, in order to manifest them also in the overall form factor concept. After the designer's job was finished, the design concept sometimes met conflicts with the capabilities of the technology. How the two are put together relies on how the design concept is managed through the engineering process. For

example when developing their camera, Futudent had the industrial design finished and went on with the product development process. When they got the working product samples, they realized the camera is overheating and additional heating surface needed to be added on it. This inevitably changed the appearance of the product, which they then aimed to keep similar to the original identity.

5.4.3 ENGINEERING BEFORE DESIGN

The third type of product development process found within the companies was the engineering driven process. In this type of process, the technology of the product was developed quite far without the use of industrial designers. At the time of the interviews, Framgo was in such an early stage of product development, that they had not used industrial designers yet, but they were going to when the product needed to be prepared for manufacturing. Typical for the development process model is that external industrial designers are involved quite late in the process, when the engineering is fixed for many attributes, giving precise restrictions for the work of industrial designer, like the measurements, places of inlets and connectors and so on. In both of the cases the product offering was a high tech product used and developed together with a software service.

This type of approach gives the engineering design the role of shaping the basic form factor of the product. If there are no intentions in how the product should look like, the design can be prone to take a form which is optimal from the technology point of view. This may significantly limit the strategic capabilities of visual design, since the basic form factor is already fixed before designers are used. However this does not mean the visual aspects of the product were not considered at all during the engineering. In the case of Framgo the interviewee had intentions in visual design, and was purposefully designing the product towards a certain form. However the technological challenges were seen as more important at that point. Visual design would follow the technology, as Kenneth Salonius from Framgo described:

“But I have also not been stressed about that(the appearance) so much, because we have a lot of other demands that need to be answered to get the product working and after that we can see what form it fits in.” (Kenneth Salonius, Framgo)

”Mutta mä en myöskään oo kovin paljon stressannu tätä vielä (ulkonäköä), koska meillä on paljon muita vaatimuksia mitä täytyy täyttää jotta tuote toimii ja sen jälkeen voidaan katsoa mihin muotoon se mahtuu.” (Kenneth Salonius, Framgo)

In this process model the role of visual design could be seen as packaging the product attractively, rather than thinking about what a certain product in a certain use case should look like. For example the wireless charging receiver of Powerkiss would have looked a lot different with this product development approach. Based on the tests Powerkiss carried out, it would have meant a failed product for the user, as it would have been unclear for the user how to place the receiver over the charging transmitter. If the testing would have considered only the

technological performance, it would not have indicated this. How the engineering design would restrict visual design was described by Peter Sazonius from Powerkiss like this:

"...thinking about it for example from the view of designing the circuit board, the optimal structure is usually the one that also looks the most horrible." (Peter Sazonov, Powerkiss)

"...kun mietiin esim piirisuunnittelun kannalta, optimaalinen rakennehan on yleensä se mikä näyttää sitten kaikkein kauheimmalta myöskin." (Peter Sazonov, Powerkiss)

5.5 USE OF PROFESSIONAL INDUSTRIAL DESIGNERS

As Person et al (2012) stated, "industrial designers are typically the only professionals with a specific responsibility (and training) to shape the look and feel of products" In this study the role of professional designers was important to take into closer investigation as the person responsible for shaping the visual product identity. In this section the use of outsourced industrial designers, as well as the cases with in-house designers or designers as founders of the company, are compared to the other findings in the research. The aim of this comparison was to find out how the involvement of designers would affect the product development process and strategic use of visual design.

In seven of the cases, one of the founders was a professional designer, or a designer had been recruited right in the beginning of the company development. In all of these cases usability and user experience had been emphasized in the design process, and user experience can be described to guide the development of visual design features in the product. All of the cases where visual continuity in future products was managed through implicit design features had a designer as a founder. At Zeta Design, the founder had designed the distinct and successful visual identity of the product himself, although he was not a professional designer. The founders of this company had a strong interest towards design and architecture, and were very determined in how to use visual design in their product.

Seven cases of the thirteen companies involved in the research used outsourced industrial designers. Typically in these cases the development of visual design and technology were separate processes, not being developed parallel with a similar integrity as in some other cases. Between these cases, the use of user feedback and attitudes towards it varied from user testing being a crucial part of the process, to not using user feedback during the product development process.

Whether the professional designer worked in-house or was outsourced, the companies mentioned the competence of the designer as very important for the success of the visual product design. For Miragebikes and Jolla, the talented designer working throughout the process was described in the interview as an excellent strength. Jolla involved an experienced designer early in the process of building up the company:

”And fortunately, early in this process of founding the company we found our chief designer. Who has a great deal of expertise in physical product design plus software product design plus marketing and material design plus he has exceptionally high standards, but just enough flexibility to get the job done anyway.” (Marc Dillon, Jolla)

These findings indicate that the use of outsourced designers might not fully utilize the strategic capabilities of visual design in the product development process. The work of the outsourced designers, being responsible also in creating the visual identity, was not integrated in the product development as well as the work of in-house designers. This restricts the strategic capabilities of visual design, as the person responsible for the product appearance, is not always there when the product takes shape during product development. The product decisions that were made before the designer was involved in the product development process were seen to define the boundaries of visual identity. When using outsources designer, how the designer is briefed was seen important for the strategic management of visual identity. After the designer’s work was done, the company’s capability to follow the design through engineering was also important, but less than in the *design before engineering* process model, because the technology development was determined further at this point.

5.6 DECISIONS ON VISUAL DESIGN

Decisions made by the company about in the visual product design, have a key role in the final outcome of the product. They might be decisions in conflicting situations, when the desired visual outcome would be for example too costly or difficult for the technological development. In these situations compromises need to be made, and the preferences of who is making the decisions are determining how much the visual outcome will be compromised. The decisions might also be between different options that the company has for the visual design. Typically among the findings of this study, the industrial designer made different propositions about the visual outcome, and the company’s managers made the decisions on which option to choose. Basically this means that the more different options there were to decide from, the more the one making the decisions could be seen as responsible in shaping the visual identity of the product. For example in creating the appearance for their product, the founder of Ciegus had a strong control over the visual product identity. The outsourced designers were given quite strict boundaries with the form factor when they began their work:

”We follow the process from Nokia. There the designers are involved moderately early. This means in practice that the specifications were given to them, rough measurements. We were able to give them quite exactly. They then came up with about twenty suggestions of how it could be realized, those we went through, selected gradually few and then ended up with one. We got them from an outsourced design house, called ED-design, that Nokia has also been using a lot.” (Kari Paukkeri, Ciegus)

”Seurataan Nokian prosessia. Siellä muotoilijat saa kohtuullisen aikasessa vaiheessa mukaan. Tarkottaa käytännössä sitä että tietyt perus speksit oli heille annettu, mitat karkeesti. Pystyttiin ne hyvinki tarkasti antamaan. Heiltä tuli sitten, käytiinköhän noin 20

ehdotusta läpi miten se voidaan toteuttaa, niistä valittiin asteittain muutama ja sit päädyttiin yhteen. Ja tuli sitten ulkopuoliselta, tämmönen ku ED design, jota myös Nokia on käyttäny aika paljon." (Kari Paukkeri, Ciegus)

In this case the designer's role can be seen as producing plenty of different solutions of how the product could look like, rather than suggesting how the designer thinks it should look like. In this company, although user feedback and focus group testing was used to guide the decisions, the manager was carrying out the vision of how the product should look like, rather than a professional designer.

From the different decision making methods in visual product identity questions, the most noticeable was the practice of having one person making the decisions. In ten companies there was one person having more power than the others in visual issues. Eight of these companies described having one person who was basically making the decisions by him/herself. In five of the cases the person making the decisions was a professional designer. In other cases the authority in visual design issues followed the general company hierarchy. In those three companies the person making critical decisions on visual identity of the product was not a professional designer. This does not automatically mean that the person would not be competent in visual product design questions, as the case of Zeta Design illustrates. At Zeta Design, the founder had initially designed the succesful products style himself.

5.7 PROBLEMS AND CHALLENGES

One aim of the study was to find problems and challenges startup companies face when managing visual identity of the product. However, interviewees seldom described major problems. Instead the founreds seemed to be mostly happy about their process when it comes to product appearance, and described positive things in being a startup company compared to larger ones. The interviewees often mentioned agility and easy of making decision as positive things. Also not having to follow processes and keep formal milestone meetings were described to speed up the process. Although the companies were mostly happy about their visual design process, two challenges were repeatedly mentioned:

1) Lack of experience and resources.

2) Creating a common understanding inside the company.

Seven of the companies described having problems related to visual design because of the *lack of resources* in product development. The lack of funding restricts the companies to hire enough experts or buying the knowledge that bigger companies would naturally possess. Also the lack of time was seen as a restricting thing, when there was no time to think about every detail in visual product design, when the product development was facing bigger issues elsewhere:

"We have thoughts about creating certain surfaces with the cooling plates. This means leaving some areas without the plates for a logo or writing. When you leave something out of it, it

suddenly becomes a design element. But those are on a detail level that would have needed so much more time, prototypes and mock-ups, versions, and more people to think about it. We would have got there, but we needed to be quite functional and effective: Is it there? Yes, move on!" (Niko Rusanen, Futurent)

"Tosta nyt on sitten ajatuksia että noilla rivoilla voi tehdä tietynlaisia pintoja, eli jättää rivottamatta alueen ja laittaa siihen merkin, laatan , kirjotuksen. ni sitte yhtäkkiä se onki niinku design elementti ku oot jättäny jotain pois. Mut siinä ollaan destkuissa että ois vaatinu niin paljon aikaa, prototyyppejä ja hahmomalleja ja versiota ja isompi porukka miettimään sitä ni kyllä sieltä ois tullu sellanen mut piti olla aika funktionaalinen ja tehokas et: onks se siinä? on, eteenpäin!" (Niko Rusanen, Futudent)

Still some companies thought that the lack of resources had a positive influence for the visual design of their product. Nina Ignatius from Beibamboo said that the *lack of experience* on the product segment made her force her own vision of the product, even when the experts wouldn't have done it that way. That was seen as positive thing for making new ideas and thus differentiating the product from competitors.

Also Tuukka Kingelin from Uploud Audio said that the lack of resources made them do better, because with the small resources, one has to make things wisely. He thinks their product would have been worse if they had limitlessly money to make it.

The interviewee of three cases talked about an issue of *creating a common understanding* inside the company about what is good and valuable in the design and work they are doing. Who were involved as founders, and who were hired to the company were seen as the only major possibilities in influencing this. Peter Sazonov from Powerkiss said that every employee should internalize how the company understands its value generation:

"Control is one thing for sure, but you should be able to create the culture, so that the job gets done well. Ok, the processes create the culture and so on. But how to get it part of the identity of how people do things is a big question. It surely comes from which kind of people you hire to do what." (Peter Sazonov, Powerkiss)

"Tiukka kontrolli varmasti, mutta tavallaan se että miten pystyy luomaan sen kulttuurin että se duuni tulee valmiiksi sellaisessa paketissa että se on hyvää. Okei prosessithan luo sen sen kulttuurin ja niin edespäin. Mutta miten se saadaan osaksi identiteettiä miten itekki teet sen duunin kanssa niin se on iso kysymys. Kyllähän se menee sen mukaan millasia ihmisiä palkkaat sinne tekemään mitäkin." (Peter Sazonov, Powerkiss)

Jolla was found to have accomplished the common understanding within the employees by carefully selecting the people who were involved and hired:

"So the real key has been finding absolutely and only the best people in the world that share the vision we do and they are also the people that we want to work with every day." (Marc Dillon, Jolla)

5.8 FINAL NOTES

Managing visual identity of a product in a startup company was often found to be a sum of loosely defined, evolving strategic intentions, and unstructured product development processes. Strategic capabilities of visual design were seen to be depending on practices in the product development process. When studying deeper the intentions and meanings behind the visual identity of the case companies' products, I found out that the startup companies seldom had clearly defined strategies in their visual product design. Simplicity and feeling of quality were the most typical meanings intentionally manifested in the visual product design. The strategic intentions were more in the way of thinking about the visual design of the product. Having a common understanding about design issues was seen as important in formation of the product appearance. How the product should look like and why, was seen as something that is in a constant state of change, instead of something permanently stated. The changing nature of visual product design strategy was also indicated by the lack of intentional strategies in succession of visual identity of a product.

Because the strategic intentions in visual product design were often undefined, the practices in product development were found to be more influential in formation of the visual product identity. This resulted in the definition of strategic capabilities of visual design (as an act of creating product appearance intentionally) in the three types of product development models generated through the data gained in the study. These capabilities are illustrated in the figure 30 as a variable in time during product development, from creating the product idea until the product is ready for manufacturing. The formation of the core of product's visual identity is also illustrated on the same timeline in order to understand the ability to manifest company's strategic visual design intentions in the overall form factor of the product. In the following, the findings of this study are being illustrated through the three product development models generated in this study.

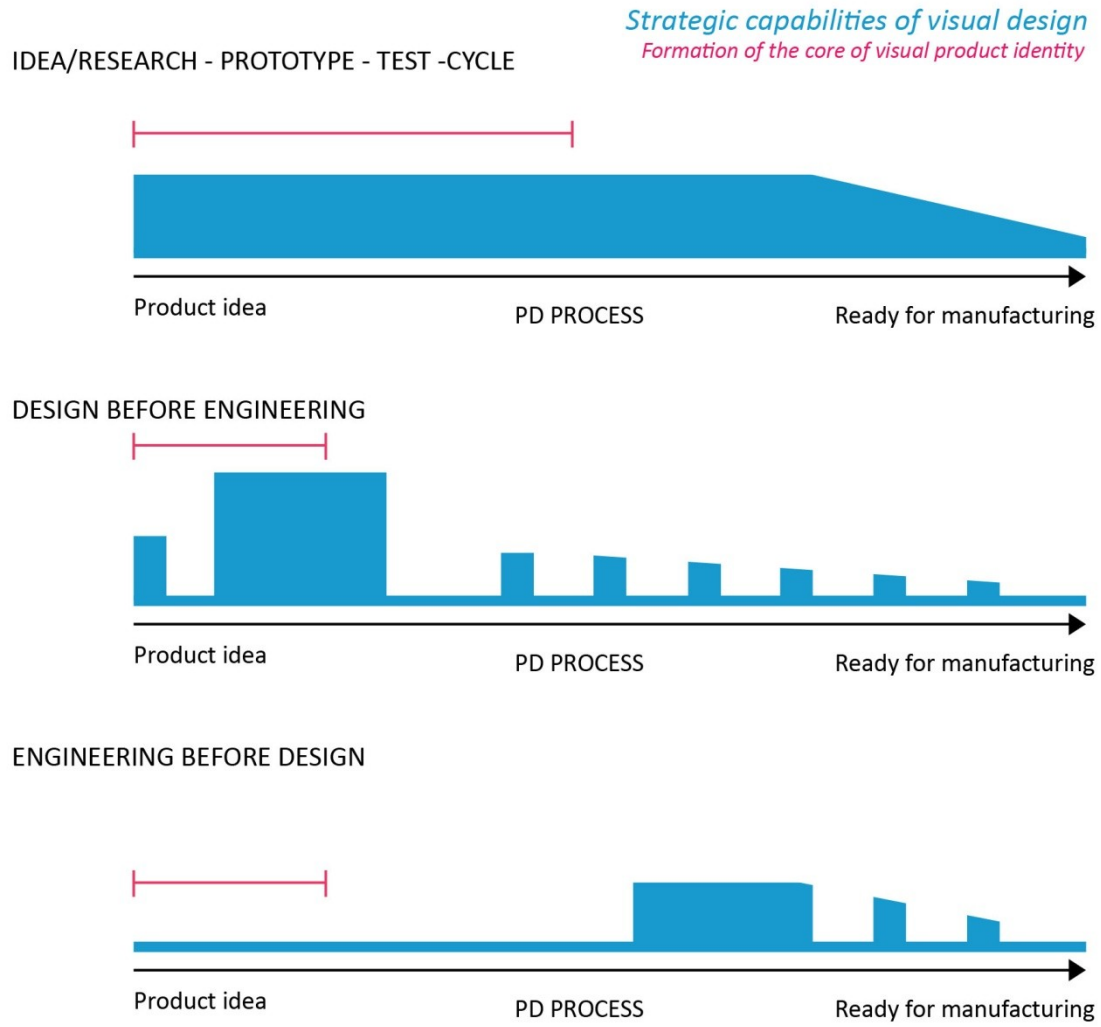

Figure 30. Strategic capabilities of visual design (as an act of creating product appearance intentionally) to implement the strategic intentions in visual product identity during product development process.

In the *Idea/research – prototype – test –cycle* product development model the core of the visual identity of a product is taking its form during a longer period of time than in the other models, because it is developed and tested along with the other functions of product development. The strategic capability of visual design is constant through the development process due to the constant intentional development of visual design, and involvement of professional designers. This allows the strategy in visual design to be developed and clarified during the process, because it could be implemented in the product design virtually any time. In fact, the strategy and practice were more intertwined in this process model than in the others, based on the interview data.

In the other two process models, formation of the core of visual identity product identity takes place earlier in the process. It takes its form from the design- or engineering perspective, according to the type of process model. In the *design before engineering* model the strategic capabilities of visual design are high early in the process because there is less restriction by the technology development. After the industrial designer has finished the design work, the capabilities drop, because the visual design is often fixed and the engineering is supposed to

follow the given directions. How strictly the visual design directions were followed in the study varied between the cases. During the engineering process the designer is involved at some moments as a reviewer. At these moments the visual design takes moderate strategic capabilities, as it could guide the choices made by engineers. In the *engineering before design* model, visual design has strategic capabilities quite late in the product development process. The capabilities are also lower than in the other models, due to the restrictions from fixed technological choices. In both of these models, visual design is also seen to have some strategic capabilities throughout the process without the involvement of professional designers. These capabilities depended on the other professionals forming the product and making decisions on the appearance. How high the strategic capabilities are without professional designer, could not have been defined in the study, and they evidently depend on the founders' and engineers' design capabilities and interest in the visual aspects of their product.

The interviewees saw the competence of designer as an important aspect in visual design of the product. However the use of outsourced designers did not support the consideration of visual design throughout the product development process as much as having in-house designers did. This restricted the strategic capabilities of visual design, because the decisions and development made before the designer was involved were defining the boundaries of visual identity. This development did not consider the visual aspect of the product in a way the development made by designers did.

The most noticeable model of making decisions on visual design was having one key person making the decisions by him/her self, or with the aid of other company members. The person making the decisions was given the authority due to the competence as being a professional designer, or due to the overall company hierarchy. Naturally, in the latter case the person is not always a professional designer. The strategic capability of visual design in decision making depends on the vision of the key person.

The findings indicated that there are challenges in defining strategies for visual identity of a product, because the identity of the whole company was often not clear. The key aspects in managing visual identity of a product in startup companies were found to be in the practices of product development: type of product development model, how decisions in visual design were made, and how the professional designers were being utilized. The strategic capabilities of visual design depended on the choices made in these key aspects.

6 CONCLUSION

In this case study I found the startup companies to have various amounts of strategic thinking in their visual product design efforts. Generally the strategic intentions behind the design features were loosely defined and typically in a progress during the product development process. The strategic intentions were found to be more in the way of thinking and having a common understanding between the startup personnel about visual product design issues. How this common understanding could be achieved was seen as a challenge, and the only effective way was found in careful selection of the employees and co-founders. Ravasi and Lojacono (2004) suggested that the managers should take a key role in diffusion of new design principles throughout the company. However, they based their suggestions on studies about design-driven renewal in larger companies, which are changing their product style rather than creating a new one like the startups do.

The main difference between the findings of the case study research, and the past literature that I reviewed, was in what I saw to be emphasized in design management as the prime influence in visual product design. In the reviewed literature, the emphasis was typically in building a suitable strategy for visual design and fewer guidelines were found for managing the visual design throughout the product development practices, let alone doing so in a startup company. The findings of the case study research emphasized the role of product development process in defining the visual identity of the product. The three product development models defined in this study were shown to have different strategic capabilities in the use of visual product design. The idea/research-prototype-test –cycle model was found to synchronize the management of all the functions of product development in the generation of visual product design identity. The literature suggests that development of visual design is entwined with the technological development of products, so managing them alongside should allow better control in formalizing the strategic intentions in the product appearance. This model of product development was found to have the best strategic capabilities of visual design, and the strategy and practice were more intertwined than in the other product development process models.

Having an in-house designer was found to have an important role in fostering the strategic capabilities of visual design in the studied startup companies. The outsourced designers were not involved throughout the product development process, and did not have as much effect on the strategic capability of visual design as the in-house designers had. The importance of the skills and competence of the designer in visual product design was indicated both in the literature review and in the case study on startup companies. As the startups often relied on one individual in visual product design, choosing the competent designer is even more important. Companies can influence this by hiring, but when outsourced designers are used, the competence may not be as controllable by the company.

Finally, few of the companies had any strategies in the succession of visual design over product generations. However, as pointed out in the literature review, the very first product of a company is the basis for brand recognition in the future. Therefore the short-term decisions

startup founders make in their visual product design may have longer-term consequences that they may not realize.

6.1 LIMITATIONS OF THE STUDY AND SUGGESTIONS FOR FURTHER RESEARCH

The case study research was conducted during the summer 2013 in Finland, and the majority of the companies were based in Helsinki area. The results might be different if the studied companies would be from other parts of the world. The study is based on findings from one interview with a founder or manager of the company. A more thorough understanding of a single case could have been gained with more interviews or for example by working in the company. In the study, both the strategies in visual design, and practices in product development process were studied to find out the main influences in visual product design. By concentrating on either the strategic side or the practices of product development, the interviews and analysis could have gone deeper in that particular area. As the practices in product development turned out to be more influential in visual product design, I decided to focus on that side in the deeper analysis.

The study raised many questions for further research. Creating a common understanding between the startup personnel on how the things should be done was seen as a challenge in the multidisciplinary product development team. However, having a common understanding was seen as an enabler for implementing the company's initial intentions into the visual identity of a product. How startups could achieve this between the passionate founders and multidisciplinary project team could be studied further. The product development process model of an idea/research – prototype – test –cycle was found to generate most distinct looking products and have the most constant strategic capabilities of visual design. This process model was found only within the companies with a designer as a founder. The use of similar product development approach without in-house designers could be subject to study from the viewpoint of visual identity of a product. A way to use outsourced designers to foster synergy of strategic and practical design management could also be investigated.

6.2 MANAGERIAL IMPLICATIONS

As shown in this study, what influences the visual identity of a product is a complex question, and general guidelines for managing visual design in startup companies are hard to define. However, this study raised some key issues enabling or restricting company's capabilities to utilize the strategic potential of visual product design.

The literature review suggests that also the startup companies should think visual design issues further in the future, because the first product is the basis for brand recognition. However, in the reality this turned out to be a challenging task for many companies, and building consistent

strategies beforehand may easily seem like a waste of time. Instead, the findings of this study suggest the founders to think more about the meanings of the first product, and *does the appearance of the product represent what you want to build your brand on?*

The structure of product development process seems to have an important role when exploring the different possibilities for the visual identity of a product. The companies using an iterative cycle of ideating, prototyping and testing, were seen to generate the most distinct looking products that were already tested to have the appropriate visual identity for the planned use case. This finding suggests that when testing is used appropriately*, user testing can be used as a tool for creating a distinct looking product for brand recognition* and, *by testing the visual product identity during product development, the suitability of product's appearance for the use case can be evaluated.* The difference between this kind of exploratory user testing and some other user feedback methods should also be noticed. By simply asking the customer what the product should look like is not encouraged by this study. In order to create distinct looking products that draw attention and enable recognition in the market, the findings of this study suggest that in contrast to trying to please everyone with the design, companies should *trust the competent designer's instinct.*

How and when the professional designers are used during the product development process seems to be a critical question for enabling the implementation of company's strategic intentions in visual product identity. Also the past studies support this finding. The best advantages for strategic use of visual design seem to be gained through *having an in-house designer.* But there are a couple of issues that should be considered if doing so. 1) *The designer should be competent enough to be trusted in key decisions about visual product design*. 2) *The designer should be involved throughout the product development process, and the designer's work should be entwined to the work of engineers and other functions.* This way, the strategic intentions of the company, brand and visual product design can be generated at the same time. The designer is recognized as an expert in visual design and communicating brand values through visual product design, which suggest that he/she should be given the authority in key decisions about visual design.

Not all the startup companies have an opportunity, or are even willing to hire an in-house designer. When *using an outsourced designer*, the work of the designer and other company functions seem to be always somewhat separated. When using an outsourced designer, the findings of this study encourage the founders to give more thought on the strategy and meanings behind the design: *why are you using a designer?* When using an outsourced designer, design phase often seems to be more condensed; it starts with a brief from the company, and ends after selecting the best design from the options designer developed. The engineering has a greater role in determining the visual identity before, and after the design phase. To give the designer the best options in influencing the visual identity of a product, he/she should be involved early in the process. Otherwise the possibilities of visual design are more in packaging the product to a good looking shell, rather than thinking about how a product should look like to answer the used needs, or implement other intentions the company might have. When using an outsourced designer, the founders are suggested to either: *1) Have a good idea of the strategic*

intentions in visual product design before involving the designer, or *2) Acknowledge the role of the designer in creating the basis for the brand recognition in the future.*

Regardless of the past knowledge and strategic intentions, the situations startups face when creating the visual identity of their products are often challenging and unpredictable. I hope the findings of this study give guidance for founders of new startups on managing the visual product identity and creating a strong product brand.

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APPENDIXES

APPENDIX 1: Focused research questions

How much the interviewee pays attention to their product design in general?
What goals do startups have in styling their products?
What are the strategic intentions of the companies' and how do they compare to their possible strategy on product styling?
How do startup companies develop their brand style in product design?
Do the companies have intentions on visual recognizability of their products?
Do the companies have intentions in achieving consistency within their product portfolio and over time?
Do the companies use genuine or stringed design references to brand value?
Are the companies using any implicit or explicit design cues in their product design?
Do the companies have a stated design philosophy?
Are there intentions on managing the balance between continuum and change in visual product design?
Are the managers aware of visual design issues?
Are the designers aware of the company strategy and processes in a small company?
How the visual design of a product comes together in the product development process, and how much is it intentionally managed?
Do the startup companies have defined goals in developing their business?
How much the companies appreciate the work of designers?
In which state of the product development are industrial designers involved?
How are the decisions on visual design made, and who is involved in making them?
Is there key persons identified controlling the visual identity?
Who is in charge of the product development projects?
Find out about the companies:
Life-cycle stage of product category
Renewal cycle of product models
Brand position
Width and structure of product portfolio
Brand heritage
Product history
Life-cycle stage of product category
Renewal cycle of product models
Brand position
Width and structure of product portfolio
Brand heritage
Product history

APPENDIX 2: Interview guide document example

Company address: x Case company name: x
Contact information: x

Finding the start-up (why the company does what it does)

Why was this company founded?
What is the founders' background: work history and education?
How do you see your company developing in the future?

Value proposition

What is your product offering?
Did the product(s) have any history before founding the company?
Is there more products coming to the portfolio, and how do they differ?
How would you describe your competitors and the category?
What is unique about your product compared to competitors?

Organization

How do you develop your products?
What kind of teams do you have?
Who is in charge of the projects?
Did you have industrial designers involved in product development?
When were the industrial designers involved in the process?

Visual product design

Why does the product(s) look like it does?
Is there something you think the customers require?
Does the manufacturing play a role in the outcome?
What are the main features of the look and feel of your product(s)?
What are the main things that make it look like your product?
How important the look of your product is?
For the company and the consumers?
What other options did you consider for the visual design and why were these chosen?

Managing the visual identity

How did the visual design of the product develop to this point?
How do you make the decisions of how your products should look?
Who was involved in the decision making, and why?
Do you have design guidelines or other ways in controlling the design?
Do you take feedback from outside the company?
When was the visual design finalized during development?
Was there any changes made after that in the appearance?

What were the benefits of this process of deciding the look of the product?
What kind of challenges or problems did you face during the process of deciding the look of the product?

Future of the products

How will your next products look like, and why?

How do you control the evolution of the visual design from this product to the next one?

Brand core values

How would you describe your brand in general?

What are the core values?

Appendix 3

Table 1, explanations, company background

CATEGORY	EXPLANATION
COMPANY FOUNDERS	Qualities of founders of the case company
Designer founder/inhouse from start	At least one of the founders is a designer, or an inhouse designer is taken aboard in the beginning
Founder used to work for Nokia	Nokia was the main employee of at least one founder before founding the company
Aalto University student/researcher	Atleast one of the founder has been a student in Aalto University, or working there
Enterpreneurial background	At least one of the founders has been an entrepreneur before the current case company, or is an expert on the subject
THINGS INFLUENCING FOUNDING	Things enabling or greatly influencing founding of the company
Start-up incubators etc	The company has been co-operating with start-up incubators
Product idea to business plan	The founders got first an idea for the product, and build the business plan over that
Personal interest to product idea	The founders had personal interest on the product category where the company operates in, before founding the company, and created product idea on that
Self employment to produc idea	Making a living by employing oneself was a main reason for founding the company
Need on the market to product idea	Founding a need for solution on the market was a main reason for creating the product idea and founding the company
Having all the good things for a start-up	The company was founded because all the good things for founding a company existed

Appendix 4

Table 2, explanations, Product strategy, what they do

CATEGORY	EXPLANATION
PRODUCT OFFERING	Qualities of the companys product offering
High tech product	The product contains micro-electonics
Technology product	The product contains electonics and mechanics
Clothing	The product is a clothing product
Product only	The company develops only a physical product
Product + software	The offering includes both a physical product and software like mobile application or internet service.
B to C	The product is targeted at consumer markets
B to B/organisations	The product is targeted at other businesses or organisations
STRATEGIC INTENTIONS IN VISUAL DESIGN	Strategic intentions in visual design recognized in the interviews
Communicate the company vision	The companys vision is manifested in the visual design
Intented meanings in design	Visual design is intentionally used to communicate symbolic meanings
Creating recognition	Visual design is intentionally used to create brand recognition
Differentiation with visual design	Visual design is used for differentiation on the market
Differentiation with usability/UX	The company differentiates with usability or user experience
Implement designers personal vision	Goal of visual design is for the designers express themselves
"Design to make it look good"	Goal of visual design is described as making the product look good, without strategic intention as such
INTENTIONAL USE OF DESIGN FEATURES	Intentional use and creation of design features that came up in the interviews
Important design features identified	The interviewee identifies certain design features in the product that are strategically important
Design features inform the user	Visual design of the product as such has been used with an intent to guide the user on how to use the product in a right way
The product is customizable	The product has been intentionally designed in a way that it can be customized
Design enables branding	The product has been intentionally designed in a way that it can be branded for third party brands
User experience guides design features	Visual design features have been intentionally formed to implement a certain user experience
Functionality guides design features	Functionality is described as a major driver for visual design
STRATEGIES IN PRODUCT SUCCESSION	Intentional strategies on managing the visual design succession, that came up in the interviews
Continuity with implicit features	The company is intending to use the same implicit design features in the future products
Continuity with explicit features	The company is intending to use the same explicit design features in the future products
Continuity through technology/functionality	Company is intending to use the same technology or functionality in the future products, which creates visual continuity for the products.
Old product as an example	Company is intending to use the current product as an example when designing the next product in order to create visual continuity
Having the same designer	Having the same designer for the current and future products is described as a tool for creating continuity in visual design
Listening to customers	Company is intending to use the current product as an example when designing the next product in order to create visual continuity
Using design guidelines	Company is using design guideline documents as a tool for creating visual continuity
No clear plans for future product styling	Company doesn't have a strategy for future product styling

Appendix 5

Table 3, explanations, Practices in product development

CATEGORY	EXPLANATION
PRODUCT DEVELOPMENT PROCESS	Types of product development processes that were recognized from the interview
Idea/research - prototype - test -cycle	The process is a circle of creating ideas or researching the field, prototyping and testing the prototypes.
Design before engineering	The design is created first by industrial designers, and the engineers continuing from that
*PD with a factory partner	Product development done together with the factory partner. Risks are put in half, the design comes from the company side.
*New development through customer cases	New product development is done when there is already an order from the customer
Engineering before design	The technology of the product is engineered first, creating the boundaries for design
*Development process from Nokia	The pd process is adopted straight from Nokia
USE OF PROFESSIONAL INDUSTRIAL DESIGNERS	How and when the professional designers are used in the PD, based on interview data
Founder/inhouse from the beginning	At least one of the founders is a designer, or an inhouse designer is taken aboard in the beginning
Outsourced industrial designers	The company uses outsourced industrial designers
Planning to use outsourced ID	The company is planning to use outsourced industrial designers later on in the PR process
Ext. ID involved in the early stages of pd	The oursoutced designer is involved in early in the PD process, when the engineering or technology has not been fixed yet
Ext. ID involved in the last stages of pd	The outsourced designer is involved late in the PD process, when the engineering or technology has moslty been fixed
Concidered working with a famous designer	The company has considered using a famous designer/design house for the product design. The purpose seems to be about getting recognition more than good design.
Important to have a competent designer	Having a competent designer is described to be important for the visual design outcome of the product
Product appearance is important	The interviewee thinks visual design is important or very important for the product
FOLLOWING THE DESIGN CONCEPT THROUGH PD PROCESS	How the visual design concept is formed and implemented during the time period of PDprocess
Aim to keep the fixed design	Designers create the visual design requirements first, and the company aims to keep the fixed appearance through engineering.
More flexible to change the design in the pd	The company created visual design concept to function as a guideline for product appearance, and is flexible to make modifications to it during engineering
Design and technology developed parallel	Visual design and engineering are being developed hand in hand, neither of them dominating the process
HOW DECISIONS ON VISUAL DESIGN ARE MADE	How the companies make decisions about visual design, and who does the decisions, based on the interview data
1 person making decisions	One person holds the vision of how the product should look and makes the decisions
Democrazy + 1 person	The decisions are made together, but one person has a bigger word
Self organized/democrazy	Decisions made informally and together
According to feedback	Decisions are made according to the feedback that the design has got.
Intuition guiding the design decisions	Intuition is described to guide the design decisions
USE OF FEEDBACK/USER STUDIES	How the companies are using the feedback and user studies
User feedback/testing a crucial part of the pd process	User feedback and testing play a major role in creating the visual identity of the product
Feedback for decisions and finalization of design	The company uses user feedback to support the decision making and finalisation of the visual design

Feedback used for design improvements	User feedback is concidered when making improvements in visual design during the PD process
Don't ask users for decisions	The interviewee thinks it is better to trust the inside knowledge and experience when making decisions than to ask the users.
Don't ask users during product development	The company does not use user feedback during product development or it does not play any major role in creating visual design.